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**Correlates of adolescent fore setting:  
Examining the role of fire interest, attentional bias, impulsivity and empathy.**

Hoerold, Doreen

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King's College London

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**Volume I: Service Evaluation Project**

**&**

**Main Research Project**

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**Doreen Hoerold**

**Thesis submitted in partial fulfilment of the degree of**

**Doctorate in Clinical Psychology**

**Institute of Psychiatry, King's College, London**

**May 2013**

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**Service Evaluation Project:**

**Referrer satisfaction with services provided at the  
National and Specialist Obsessive Compulsive Disorder  
clinic for children and adolescents at the  
Maudsley Hospital**

---

**Supervised by:**

**Dr Georgina Krebs, Clinical Psychologist,  
National and Specialist CAMHS OCD Clinic,  
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## **Abstract**

Referrer satisfaction is an often-neglected outcome measure in mental health services, and can inform service improvements. We examined referrer satisfaction with a national and specialist OCD and Related Disorders clinic for young people. An online satisfaction questionnaire, comprising 19 closed and one open-ended question, was sent to 155 referrers. Satisfaction was high overall. However, higher levels of satisfaction were noted with respect to treatment plans as compared to treatment outcome. Referrers also made recommendations for service improvements, such as increased communication during treatment, recommendations for after-care, managing co-morbidity, and improving patient engagement. Referrer satisfaction may be improved by addressing these aspects of the service, which are outlined and were fed back to the clinic staff.

# **1 Introduction**

## **1.1 The importance of referrer satisfaction**

Recently proposed changes to health care commissioning in the United Kingdom suggest a greater role for referrers, such as General Practitioners and other clinicians, in making budgeting decisions when referring clients and patients to mental health services (Department of Health, 2011). One foreseeable consequence of this is that competition between clinical services provided by the National Health Service (NHS), those provided by the private sector, and charitable organisations, will grow over the next few of years. Thus, the pressure on individual NHS services to justify their costs is likely to increase (e.g. Kaplan *et al*, 2002). The demand for accountability will most probably force services to examine not only actual outcome in terms of client improvement, but also investigate the views of those who refer clients to services in the first place. Systematic studies examining such views, however, are relatively rare.

In recent years, we have already witnessed a shift towards greater recognition of the importance of including patients and clients in the process of improving clinical care within the NHS (Department of Health, 2004; 2009). Direct research of service-user satisfaction has flourished, and aims to include the views of children and adolescents, as well as parents and care givers, as highlighted by the CAMHS Outcome Research Consortium (2007). By comparison, only a small number of studies have measured *referrer* satisfaction specifically. Rosemann, Wensing, Rueter & Szecsenyi (2006) showed that patients' experiences of

specialist medical care were more positive if a GP initiated a referral to the specialist service, rather than patients requesting the specialist referral themselves. Thus, increased understanding of the factors that lead a GP to initiate such a referral is not only beneficial in its own right, but may also assist services to ultimately improve patient satisfaction.

For specialised health services, there are additional clinical reasons for examining referrer satisfaction, which extend beyond the financial issue of the referrer as commissioner, and consequently a “customer” of the service: Clinics which treat complex and highly disabling mental health conditions such as OCD and related disorders on an outpatient basis are required to work multi-modally and systemically, particularly if treatment-resistant cases fall within their remit (e.g. Saxena *et al.*, 2002). As this is the case for the OCD clinic, it is particularly important that positive, collaborative working relations are established with all relevant elements of the system around the client, including referrers and local services. Audits of satisfaction levels among referrers can provide a useful indication of how best to maintain such positive relationships, and what may need to be changed in order to improve them.

## **1.2 Patient satisfaction versus referrer satisfaction**

While some similarities undoubtedly exist between patient and referrer satisfaction, there are also key differences between the views of these two groups, as different aspects of health care provision are prioritized (Bjertnaes,



Garratt, Iversen, & Ruud, 2009; Eysers *et al.*, 1996). This may be particularly the case in mental health services, where “quality of care” has multiple and at times conflicting meanings for different stakeholders (Atkinson & Caldwell, 1997; Hermann, Ettner, & Dorwart, 1998; Shipley, Hilborn, Hansell, Tyrer, & Tyrer, 2000). In addition, some studies have suggested that among referrers themselves, several subgroups may exist, each characterized by potentially different needs and expectations when making a referral (e.g. Clarke, 1997; Eysers, Brodaty & Roy, 1994). Eysers and colleagues compared GPs and psychiatrists as referrers to a mood clinic, and showed that GPs placed higher value on information about prognosis, proposed treatment, and assessment of risk, than psychiatrists, which may reflect the fact that psychiatrists are likely to be more familiar with psychological treatments than GPs. In addition, GPs and psychiatrists had referred patients with slightly different patient groups, in that those referred by a psychiatrist were more likely to be characterised by comorbidity and other complexity. Similarly, Clarke (1997) assessed satisfaction levels among GPs and nurses referring patients for a telepsychiatry consultation liaison service, and showed that nurses reported higher satisfaction levels than GPs, particularly for assessment-related aspects of the service. Again, this is likely to reflect differences in training and knowledge between professionals, and suggests that different groups of referrers may put emphasis on different aspects of a clinical service.

Overall, across the literature that has investigated referrer satisfaction levels, the variables referrers most often report as important are waiting times for appointments, and communication between referrer and service provider

(Bjertnaes *et al.*, 2009; Fredheim, Danbolt, Haavet, Kjongsberg, & Lien, 2011; Parker, Wright, Robertson, & Sengoz, 1996). Interestingly, Parker and colleagues' study of referrals made to a psychiatric service showed that variables accorded lower priority were billing arrangements, the service having a high 'cure' rate, or the psychiatrist taking complete responsibility for difficult patients. In contrast, results from Bjertnaes and colleagues suggest that perceived competence of the service significantly predicted GP satisfaction. Most recently, Fredheim and colleagues, in a study which used focus groups to elicit GPs' and mental health practitioners' views, showed that all participants welcomed collaboration between referrers and mental health practitioners, and were optimistic that this could be achieved in the future, to the benefit of patient care. Clearly, however, further studies are required in order to provide explanations for variation between previous referrer satisfaction findings.

### **1.3 Methodological considerations for referrer satisfaction research**

A number of authors have pointed out that thorough assessments of referrer satisfaction are problematic to conduct, particularly when referrals from large geographical areas covering national and specialist services, are concerned (e.g. Allison, Roeger *et al.*, 2008). Often satisfaction levels are examined using predominantly quantitative means. However, qualitative information about referrers' degree of satisfaction and views about the service should also be elicited (Olive, 2008). Detailed interview or focus group studies which allow such in-depth investigation are naturally time-consuming for both the service and

referrers, who work under considerable time-pressure themselves (Appleton, House, & Dowell, 1998). On the other hand, it is also possible that allowing qualitative feedback provides an incentive for busy practitioners and referrers to voice their opinion (Heje, Vedsted, & Olesen, 2011). Therefore, best methodological practice involves both quantitative and qualitative components for referrer satisfaction studies. The current study sought to obtain both quantitative and qualitative data from a nation-wide sample of referrers.

#### **1.4 Service description**

The Obsessive Compulsive Disorder and Related Disorders Clinic is a National and Specialist (Tier 4 CAMHS) service, which accepts referrals for assessment and treatment of young people up to 18 years of age with OCD and related disorders such as Body Dysmorphic Disorder, Tourette Syndrome/Tic disorders and severe anxiety disorders. These disorders are highly impairing for young people and may involve family members' daily functioning to high degree (Peris *et al.*, 2008; Storch *et al.*, 2007; Turner, 2006). OCD often goes undetected (Chowdhury, Frampton & Heyman, 2004) and a longer duration of illness prior to treatment may predict poorer long-term outcomes (Micali *et al.*, 2011). Referrals to the OCD clinic are received from services nation-wide, and young people referred often present with considerable clinical complexity. For the most severe, treatment-resistant cases there is a nationally commissioned service,

funded by the National Specialized Commissioning Team (NCST)<sup>1</sup> of the Department of Health.

Assessments are based on the requests of the referrer and family, and are conducted by a multi-disciplinary team. They commonly include establishing a diagnosis, considering differential diagnoses in complex/co-morbid cases, and producing a care plan based on the assessment information obtained. To assist this process, six measures are administered prior to the multidisciplinary meeting with the client:

- The Development And Well-Being Assessment (DAWBA; Goodman, Ford, Richards, Gatward, & Meltzer, 2000), an online diagnostic screening measure for all common Axis 1 disorders of childhood;
- a parent and child version of the Children's Obsessive Compulsive Inventory (Ch-OCI; Shafran *et al.*, 2003);
- the youth version of the Beck Depression Inventory (BDI-Y; Beck, Steer, & Carbin, 1988);
- the Family Accommodation Scale (FAS; Calvocoressi *et al.*, 1995), a parent-completed questionnaire measuring the extent to which families accommodate the child's OCD symptoms;
- the parent and child version of the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1999), a screen for internalising and externalising childhood problems;

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<sup>1</sup> The NCST was, at the time of data collection, known as the National Commissioning Group (NCG), therefore reference is made to the NCG throughout the survey used in this study.

- the Depression Anxiety Stress Scale (DASS; Lovibond & Lovibond, 1995), a parent-completed measure of parental depression, anxiety and stress.

In line with NICE guidelines (NICE, 2005), the main interventions provided by the clinic are cognitive behaviour therapy (CBT) and/or pharmacotherapy (primarily SSRI medication). CBT is protocol-driven typically involves 14 weekly sessions. There three main phases in therapy: psycho-education, exposure with response prevention (E/RP), and relapse prevention. Parents are included in treatment to varying degrees, depending on the developmental level of the young person and the extent to which parents are accommodating their child's compulsive behaviour and thereby inadvertently maintaining the symptoms.

### **1.5 Aim of the present study**

In summary, there are a number of important reasons to examine referrer satisfaction more thoroughly. In particular among mental health services, little is known about the specific factors that contribute to high referrer satisfaction. To our knowledge, no published study has investigated referrer satisfaction in a specialised service for complex and treatment-resistant mental health problems such as OCD and related disorders among children and young people. The aims of our study were to examine referrer's satisfaction with (i) assessment at the OCD clinic, (ii) treatment at the OCD clinic, and (iii) specific aspects of the services provided at the OCD clinic, such as wait time and communication with referrers. It was anticipated that the qualitative feedback obtained from

referrers would enable the generation of recommendations of service improvements for the clinic.

## **2 Method**

### **2.1 Participants**

Invitations to participate were sent to 155 individual referrers, a number of whom were working within the same service. Thirty individual referrers responded to the survey, reflecting a response rate of 19.4%. Sixteen referrers (53%) chose to remain anonymous, however all 30 provided information regarding location, the type of their service, and how many children they had ever referred to the OCD clinic. These referrer characteristics are summarized in Table 1 below. The majority of referrers were located in London, while eight were located in South East England. One referrer each participated from Central England, Northern England, and Hertfordshire (recorded as “Other”). More than half of referrals to the clinic came from CAMHS Tier 3 services, followed by Tier 4, Tier 2 and Paediatric services, and General Practice. The two referrers recorded as “Other” were identified as National and Specialist services. Lastly, most referrers had referred one child to the clinic, followed by two to four children. Three referrers had referred between five and ten children.

**Table 1: Referrer characteristics**

Location of referrer	<ul style="list-style-type: none"><li>▪ London (N=19, 64%)</li><li>▪ South East England (N=8, 27%)</li><li>▪ Central England (N=1, 3%)</li><li>▪ Northern England (N=1, 3%)</li><li>▪ Other (N=1, 3%)</li></ul>
Type of service	<ul style="list-style-type: none"><li>▪ General Practice (N=2, 7%)</li><li>▪ Paediatrics (N=3, 10%)</li><li>▪ CAMHS Tier 2 (N=3, 10%)</li><li>▪ CAMHS Tier 3 (N=16, 53%)</li><li>▪ CAMHS Tier 4 (N=4, 13%)</li><li>▪ Other (N=2, 7%)</li></ul>
Amount of children ever referred to the OCD clinic	<ul style="list-style-type: none"><li>▪ 1 Child (N=17, 57%)</li><li>▪ 2-4 Children (N=10, 33%)</li><li>▪ 5-10 Children (N=3, 10%)</li></ul>

## **2.2 Referrer satisfaction questionnaire**

The questionnaire for the referrer satisfaction survey, shown in Appendix A, was developed by the OCD team, based on their experience of conducting two previous clinic audits (Hilton, Turner, Krebs, Volz, & Heyman, 2011; Robinson & Turner, 2010). It includes 19 closed and one open-ended question designed to obtain demographic information and assess referrer satisfaction with services provided by the OCD clinic, including waiting times for assessment and



treatment, clinical reports, outcome and communication. The survey also elicits recommendations for aspects of the service which may be improved.

### **2.3 Procedure**

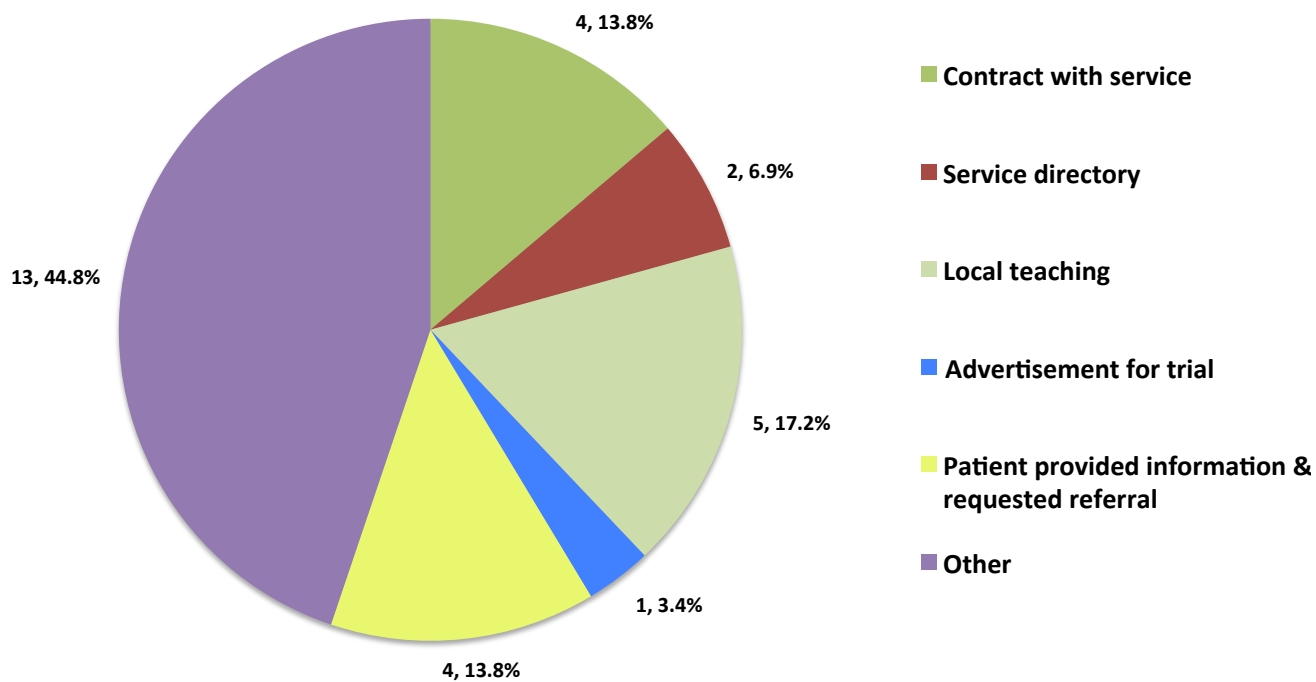
All individuals who referred patients to the OCD clinic between 1996 and 2010 were identified and contacted by postal mail with a request to participate in the online survey. The electronic link for completion of the survey was sent via electronic mail.

### **3 Results**

One referrer was excluded from analyses, as his/her survey was abandoned after referrer characteristics were provided, and no satisfaction or any other ratings were reported by this referrer. Descriptive statistics are therefore reported both in the form of raw frequency counts and percentages, for 29 referrers.

#### **3.1 Pre-referral: Access to information about the OCD clinic and service**

Figure 1 shows how referrers found out about the service of the National and Specialist OCD clinic for children and adolescents. As can be seen, almost half of referrers responded with “Other” to this item. The free-text explanatory responses provided by these referrers are detailed in Table 2 below. The remaining referrers found out about the OCD clinic’s service through local teaching, an existing contract with the service, patients providing information and requesting a referral, or through the service directory. One referrer had obtained the information through an advertisement for the randomized-control trial currently conducted at the clinic.



**Figure 1: Referrers' reports of how they found out about services provided at the OCD clinic**

As shown in Table 2, the 13 responses provided under the category of "Other" can broadly be divided into three themes: Previous professional experience of the service (including research) (N=3), Communication with other professionals (N=8), and Other (N=2). This last group of responses comprised those which did not provide additional information about how referrers found out about the service of the OCD clinic.

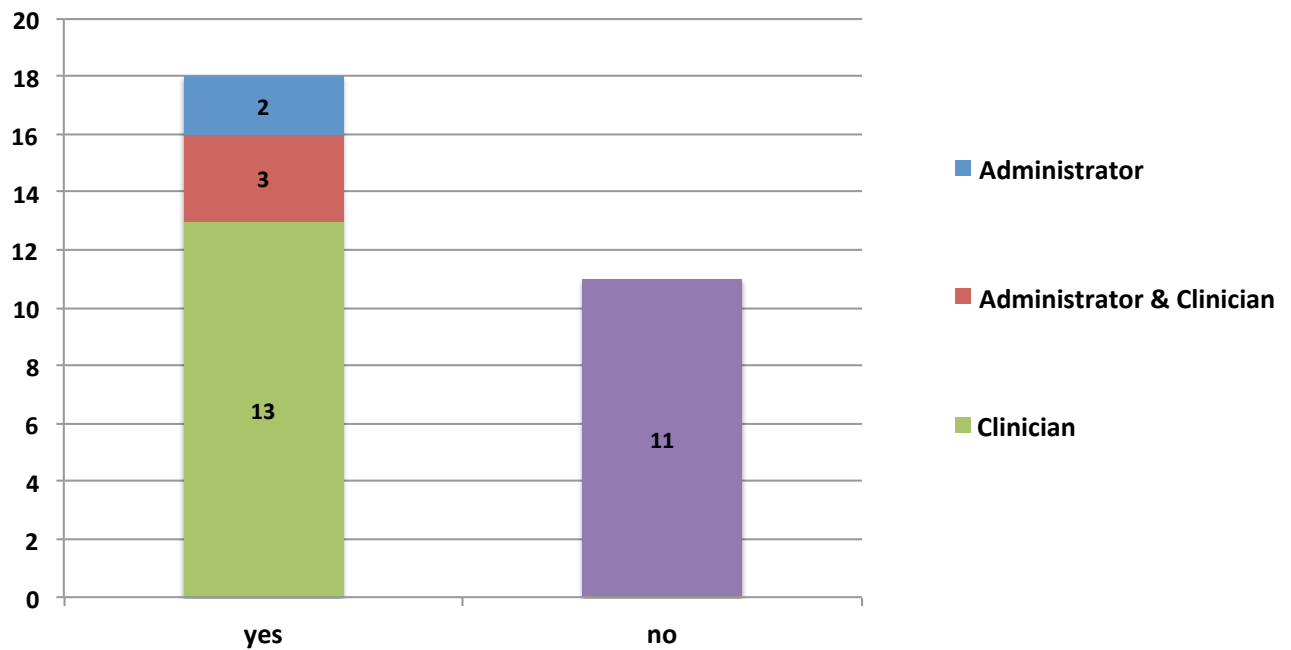
**Table 2: Free-text explanatory responses regarding “Other” ways in which referrers found out about the services of the OCD clinic**

Theme	Responses
Previous professional experience of the service (including research)	<ul style="list-style-type: none"> <li>▪ “I have used the service in previous posts”</li> <li>▪ “I previously worked in the department”</li> <li>▪ “Research involvement”</li> </ul>
Communication with other professionals	<ul style="list-style-type: none"> <li>▪ “Consultant colleague”</li> <li>▪ “Close links with SLaM”</li> <li>▪ “Through knowing about the work of Dr Heyman”, “I went to lecture by Dr Heyman”</li> <li>▪ “Word of mouth”</li> <li>▪ “Work in same department”</li> <li>▪ “From discussions within CAMHS service I work in”</li> <li>▪ “I am aware of service as I am a CBT therapist”</li> </ul>
Other	<ul style="list-style-type: none"> <li>▪ “Request following private psychiatric Assessment”</li> <li>▪ “I am aware of the service”</li> </ul>

Additionally, referrers were asked whether or not they found it easy to access information about the clinic’s service. The vast majority of referrers (N=26, 90%)

responded with “Yes”, while three referrers did not find it easy to access such information.

As a final question regarding pre-referral aspects, referrers were asked to indicate whether or not they had had any interaction with the OCD clinic prior to making their referral, and if so, with whom. As illustrated in Figure 2 below, over half of the referrers did have some form of contact with the OCD clinic prior to referral (62%). Thirty-eight per cent of referrers did not have any contact. Of those who did have contact with the clinic, the majority indicated that this contact was with a clinician (72%), followed by both clinician and administrator (17%), and administrator alone (11%). One referrer, whose response was recorded as “Other”, indicated that his contact with the clinic prior to referral was with a consultant.



**Figure 2: Referrers' interaction with the OCD clinic prior to making a referral**

Of those referrers who did have contact with the service prior to making a referral, the vast majority were "Very Satisfied" (N=15, 83%), "Somewhat Satisfied" (N=1, 6%) or "Neutral" (N=2, 11%), in terms of satisfaction with the information provided during this interaction. No referrer responded with "Somewhat Unsatisfied" or "Very Unsatisfied" (N=0, 0%).

### **3.2 Assessment at the OCD clinic**

In all cases except one did the referred child/children receive an assessment at the OCD clinic (N=28). With regard to wait time to assessment, most referrers were "Very Satisfied" (N=21, 75%) or "Somewhat Satisfied" (N=5, 18%). One referrer rated this as "Neutral", while one referrer reported being "Somewhat

Unsatisfied". This referrer completed the survey anonymously, therefore objective wait time to assessment could not be ascertained. No referrer responded to this item with "Very Unsatisfied" (N=0, 0%).

Ratings of satisfaction with treatment recommendations and care plan showed that the majority of referrers were "Very Satisfied" (N=25, 89%), or "Somewhat Satisfied" (N=1, 4%), no referrer responded with "Neutral", while one referrer was "Somewhat Unsatisfied, and one "Very Unsatisfied". Closer inspection revealed that the referrer who found the treatment recommendations and care plan very unsatisfying had referred one child from a Tier 4 CAMHS, and specified the following in a free-text response that for the case of this particular referral:

*"We didn't gain anything from the assessment that we had not done already ourselves. We had hoped for specialist treatment and assessment."*

Lastly, referrers were asked about their perception of the length of the clinic's treatment report. This was rated as "Just right" by all 29 referrers.

Table 3 below shows frequencies of satisfaction ratings for wait time to assessment, treatment recommendations and care plan.

**Table 3: Frequencies of satisfaction ratings for aspects of assessment at the OCD clinic**

Item	Frequency of responses				
	Very Satisfied	Somewhat Satisfied	Neutral	Somewhat Unsatisfied	Very Unsatisfied
Wait time to assessment	N=21 (75%)	N=5 (18%)	N=1 (3%)	N=1 (4%)	N=0 (0%)
Treatment recommendations and care plan	N=25 (89%)	N=1 (3%)	N=0 (0%)	N=1 (4%)	N=1 (4%)

### 3.3 Treatment at the OCD clinic

Twenty-four referrers (86%) reported that the child they referred received treatment at the OCD clinic, while four (14%) did not (missing data: N=1). Consequently, satisfaction with treatment aspects is reported for a total of 24 referrers.

Firstly, with respect to communication throughout treatment, the majority of referrers were either “Very Satisfied” (N=16, 67%), “Somewhat Satisfied” (N=3, 13%) or “Neutral” (N=2, 8%). Two referrers reported being “Somewhat Unsatisfied” (8%), and one “Very Unsatisfied” (4%).

Satisfaction ratings were also obtained for treatment outcome, with which twelve referrers were “Very Satisfied” (60%), four were “Somewhat Satisfied” (20%), two were “Neutral” (10%), and two reported being “Somewhat



Unsatisfied” (10%) (missing data: N=4). No referrer responded with “Very Unsatisfied” (0%).

Closer inspection revealed that of the two referrers who rated treatment communication or outcome as somewhat or very unsatisfying, one had referred one child to the OCD clinic, and had highlighted communication between services as particularly worthy of improvement. In addition, one referrer clarified that a rating of “Neutral” was given for satisfaction with treatment outcome because treatment was still ongoing, therefore no outcome existed yet.

The frequencies of satisfaction ratings for communication throughout treatment and treatment outcome are shown in Table 4 below.

**Table 4: Frequencies of satisfaction ratings for treatment aspects at the OCD clinic**

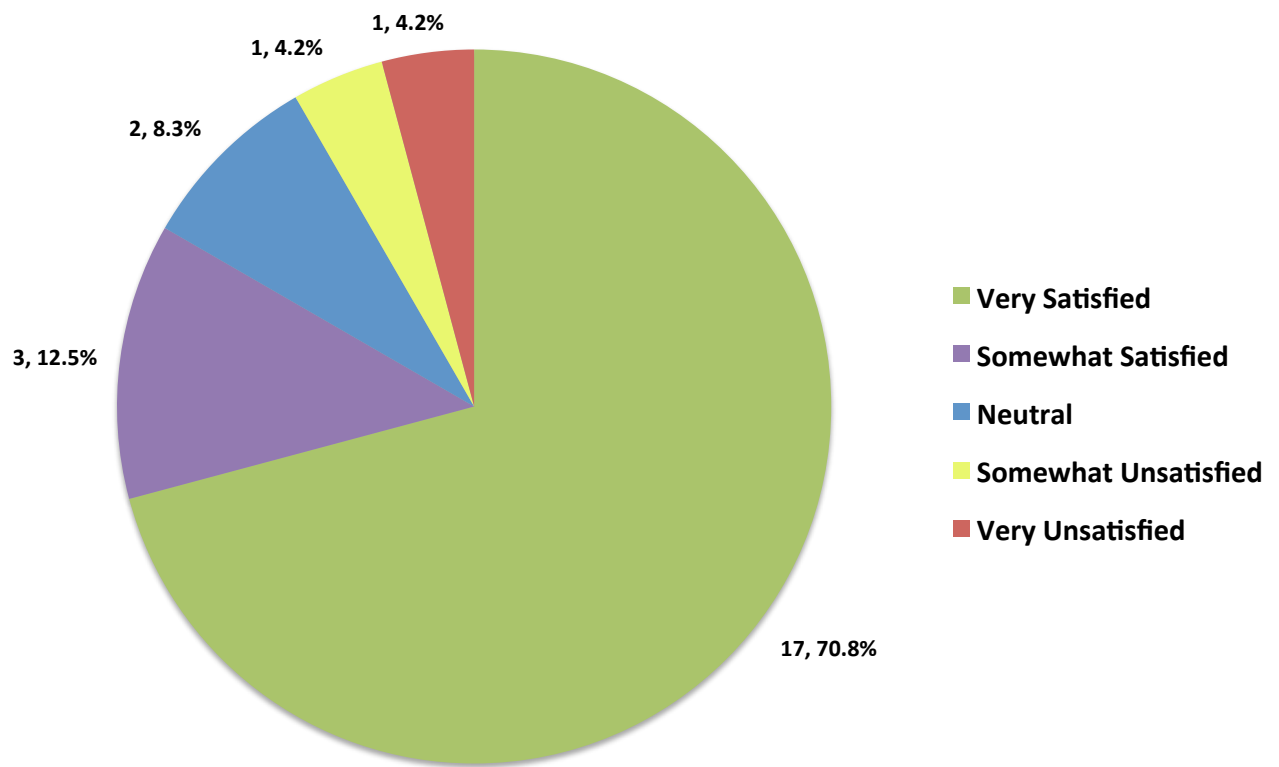
Item	Frequency of responses				
	Very Satisfied	Somewhat Satisfied	Neutral	Somewhat Unsatisfied	Very Unsatisfied
Communication throughout treatment	N=16 (67%)	N=3 (13%)	N=2 (8%)	N=2 (8%)	N=1 (4%)
Treatment outcome	N=12 (60%)	N=4 (20%)	N=2 (10%)	N=2 (10%)	N=0 (0%)

### **3.4 Awareness and use of National Specialised Commissioning Team (NSCT) service for adolescents with severe treatment-resistant OCD**

Just over half of referrers (N=14, 52%; missing data: N=2) were aware of the NSCT service for adolescents with severe treatment resistant OCD at the clinic. Of those who were aware, just less than half had used the service in the past (N=6, 48%). Of those six who had used the service, four reported that they were “Very Satisfied” (67%), one was “Somewhat Satisfied” (16%), none responded with “Neutral” (0%), while one referrer was “Somewhat Unsatisfied” (17%) with the NSCT service. Since this referrer reported to have referred one child only to the service, this suggests that the ratings provided by this referrer apply to one severe treatment-resistant case only, as discussed below. No referrer reported being “Very Unsatisfied” (0%).

### **3.5 Overall satisfaction with the experience of referring to the clinic**

As Figure 3 illustrates, the majority of referrers gave positive ratings for their experience of the referral process, reporting either being “Very Satisfied” (N=17, 71%), or “Somewhat Satisfied” (N=3, 13%). Two gave Neutral responses (8%), while one referrer reported being “Somewhat Unsatisfied” and one “Very Unsatisfied” (4%, respectively) (missing data: N=5). Closer inspection revealed that both referrers who had provided “Somewhat” or “Very Unsatisfied” ratings had each referred one child only to the clinic. In the case of one of those referrers, that child had been referred to the NSCT service for severe treatment-resistant OCD.



**Figure 3: Overall satisfaction with referral to the OCD clinic**

### **3.6 Recommendations for service improvements**

Twenty-two referrers responded to the item regarding areas of service which may be improved. While the majority did not feel that there was any area of the National and Specialist OCD service that could be improved (N=14, 64%), the remaining 8 (36%) were invited to make recommendations for service improvements based upon their experience. Seven of these did provide suggestions, shown in Table 5.

**Table 5: Recommendations for service improvements**

Theme	Example Quote
Communication	<ul style="list-style-type: none"><li>▪ “There is a distinct lack of communication when patients are admitted for inpatient treatment. The patient was discharged about seven months ago and we still do not have communication about the what was successful or how things should be planned to help this person”</li><li>▪ “I think the quality of the clinical record was poor and liaison with local service was also lacking”</li><li>▪ “better advertising of services to primary care”</li></ul>
Provision of After-care / Follow-up	<ul style="list-style-type: none"><li>▪ “Outreach follow-up if possible though appreciate that distances make this difficult”</li><li>▪ “Helping with management of co-morbidities in the after care plan”</li></ul>
Patients’ Engagement	<ul style="list-style-type: none"><li>▪ “One parent found it off-putting to be sent lots of questionnaires by post prior to the assessment”</li><li>▪ “The young person was assessed by an assistant psychologist not a specialist. The young person could not speak about themselves during certain times of the day and bravely asked to be seen at other times. This was not catered for. In addition, cultural factors important to this young person's engagement with services were considered not so important and reports from clinicians working with the family were not considered in the final formulation. Finally, the young person was considered too complex for the treatment- resistant service, which was very disappointing.”</li></ul>

## 4 Discussion

### 4.1 Satisfaction ratings

Referrer satisfaction, although increasingly important for commissioning and clinical reasons, has been largely under-researched in comparison with studies examining patient satisfaction. Those studies which have focused on referrers have produced inconsistent findings so far, and have also pointed to potential key differences in expectations from clinical services between patients and types of referrers (Bjertnaes *et al.*, 2009; Clarke, 1997; Eysers *et al.*, 1996). This study therefore aimed to investigate referrer satisfaction with clinical services provided at a national and specialist clinic for treatment-resistant OCD and related disorders, and to use the feedback obtained from referrers to suggest appropriate service improvements. An online survey was constructed and distributed via electronic mail to individuals who had referred children and young people to the clinic across a time period of 14 years. The survey gauged satisfaction with assessment and treatment at the OCD clinic, as well as service aspects such as waiting time and communication, as those have previously been identified as most important for referrers (Bjertnaes *et al.*, 2009; Fredheim *et al.*, 2011; Parker *et al.*, 1996).

Overall satisfaction with the experience of referring to the clinic was found to be high, with the majority of referrers describing themselves as “Very satisfied”. Two referrers described themselves as either “Somewhat” or “Very Unsatisfied”. Along with the majority of referrers surveyed here, both of those referrers had

each referred only one child to the clinic. Both referrers also provided recommendations and explanations of why their experience was poor. These related to poor engagement with the patient in a complex case, and insufficient communication between the clinic and referring service. Such reduced satisfaction with aspects of communication between referrer and service is in line with previous studies of factors influencing referrer satisfaction, such as those of Bjertnaes *et al.* (2009) Fredheim *et al.* (2011) and Parker *et al.* (1996). It is likely that communication is highly valued by referrers because it promotes close collaboration and positive working alliances between agencies involved, which in turn enables shared risk management and other ultimately a more secure network of support around the patient (Fredheim *et al.*, 2011).

Upon closer inspection, it can be seen that one of the two referrers also indicated that he/she did not find it easy to access information about the services of the clinic. Furthermore, only half of referrers in this survey were aware of the National Specialised Commissioning Team (NSCT) service for severe treatment-resistant OCD. This is likely to have negative impact on levels of satisfaction with the experience of referring to the OCD clinic. This finding highlights the importance of “pre-referral” marketing aspects of national and specialist services, which will undoubtedly continue to grow in the near future. Services must be prepared to advertise what they can offer, and provide evidence of outcome in terms of improvement in functioning, client and family satisfaction. It may be that such advertisement should usefully include a description of what referrers can expect in terms of communication throughout and following treatment. It is clear that such advertisement no longer relies exclusively on

physical hard copies of service leaflets – information about services can conveniently be distributed using online resources with little restriction on the amount of information that can be included. Similarly, such online resources can be shared with many stakeholders via the world wide web, and thus close links with potential referrers can be formed more easily than in the past. Specialist services must devote increased attention to the development and distribution of such marketing material, as this is likely to affect referrer satisfaction levels. Of note, development of such marketing efforts is currently in progress in the OCD clinic.

Lastly, it is of note that satisfaction ratings were somewhat lower for treatment outcome at the OCD clinic, when compared with satisfaction with treatment recommendations and care plan: For “treatment recommendations and care plan”, combined satisfaction ratings reached 92% (= 89% Very Satisfied + 3% Somewhat Satisfied), while for “treatment outcome”, combined satisfaction ratings reached only 80% (= 60% Very Satisfied + 20% Somewhat Satisfied). This difference is likely best explained by the fact that not every patient with a care plan will show improvement in line with expectations raised in the care plan. It does highlight the need for clinicians to strive to improve treatments, in order to obtain optimal outcomes. This involves continuous professional development, training and involvement in research among the clinical team, time for which may need to be protected, in order for the clinic to continue to be able to provide effective specialist services for those with severe and treatment-resistant OCD.

## **4.2 Referrers' suggestions for service improvements**

Although reported satisfaction for all aspects of the referral process was generally high, improved communication was clearly highlighted as very important by the referrers. As the responses in Table 5 suggest, close liaison with referrers and other local services are recommended action points for the clinic. Two referrers also requested provision of after-care, for example when cases are complex and involve co-morbidity, however, as already acknowledged by one referrer, this is a challenge for the service due to logistical problems when patients are based at a considerable physical distance from the clinic. A viable solution may be a routine follow-up service by telephone, especially when suitable local services are not available to continue to support patients after discharge. Indeed telephone treatment is increasingly being recognised as an effective method of improving access to psychological treatments (e.g. Lovell *et al*, 2006). In addition, provision of some out-of-hours appointments at the clinic for aftercare in complex cases may be of benefit.

Lastly, two referrers made suggestions which aim to improve patients' engagement with the service, which require careful consideration, given the importance of engagement and positive therapeutic alliance for predicting treatment outcome in OCD (e.g. Vogel, Hansen, Stiles, & Götestam, 2006). This is particularly relevant given that satisfaction with treatment outcome itself was found to be lower than satisfaction with recommendations and care plan in this study. Enhancing engagement is therefore likely to lead to better outcomes for patients of the clinic, and increase referrer satisfaction with the service overall.



Firstly, one referrer cautioned against the use of too many questionnaires prior to patients arriving at the clinic. Although we know from a previous audit of client satisfaction with clinic services that over 95% of parents and over 78% of children report that they are happy to complete questionnaires prior to initial assessment (Robinson & Turner, 2010), the amount of measures necessary in preparation for the multidisciplinary assessment at the clinic may still represent a barrier to engagement for individual clients. In order to balance the benefit of obtaining detailed information about specific symptomatology against the risk of compromising patients' ability to engage well from the start, the clinic may be able to screen referrals carefully, and avoid sending measures that are not relevant for individual cases.

A second referrer reported that cultural factors considered important to the referred patient in question were not adequately considered. This is an important point, and under normal circumstances does not arise in the clinic, as evidenced by previous patient and parental satisfaction reports (Hilton *et al.*, 2011; Robinson & Turner, 2010). Unfortunately this referrer, who had referred one child only, chose to remain anonymous, thus it is not possible to examine the case details in order to understand this comment further. However, it is widely acknowledged that cultural factors can be highly relevant in OCD, particularly in cases of religious obsessions (e.g. Huppert, Siev, & Kushner, 2007). Thus, cultural sensitivity on behalf of clinicians is clearly of paramount importance, and should be reflected on by each team member working with clients from a variety of cultural backgrounds. An additional concern raised by this referrer concerns the assessment being undertaken by an assistant psychologist. In the clinic,

assistants work under close supervision of experienced clinicians and within the limit of their competency, with the aim of making senior staff available efficiently, decrease wait times, and make team-based decisions. However, these roles may need to be explained to patients and referrers clearly, in order to manage expectations appropriately, and enhance engagement from the outset. This could be achieved by introducing the clinic team in service brochures, and describing the extent and limit of each team member's responsibility, both prior to assessment and throughout treatment.

### **4.3 Methodological considerations**

The current study achieved a response rate of just below 20%. This compares somewhat unfavourably to a number of other published referrer satisfaction surveys, such as those of Eysers *et al.* (1996), Bjaertnes *et al.* (2009), Eysers *et al.*, (1994). Lewis *et al.* (2004), however, report having obtained interview responses from 25% of referrers, which were obtained via telephone, and thus more directly than those our own online survey. Of note, Clarke (1997) reported a response rate of only 6% for GPs in an evaluation of satisfaction with a specific telepsychiatry tool, compared to a response rate of 72% among nurses. Thus, differences may exist between response rates of different referrer sub-groups. To our knowledge, no previous study has examined such differences, nor associations between response rates and satisfaction ratings, thus there is limited knowledge of potential patterns of response bias. In our study, sample sizes of sub-groups of referrers were too small to analyse specific patterns. Furthermore, in the current study, some referrers abandoned the survey before

reaching the final item of it, which asked to rate overall satisfaction with the experience of referring. Those referrers who had abandoned the survey prior to reaching this point, had provided positive ratings (in the case of three referrers) or no ratings at all for the entire survey (in the case of one referrer), thus a response bias towards the positive in the final item is unlikely. Nonetheless, these patterns clearly require further analysis using larger sample sizes. Across the limited available literature, the difficulties in data collection for referrer satisfaction are acknowledged (e.g. Allison, Roeger, & Abbot, 2008). Therefore, we encourage replication with larger samples of responders, potentially by requesting and collecting referrer's responses for a longer period of time than the one year allocated for the current study, or conducting follow-up telephone surveys with those who did not complete the survey online.

A substantial proportion of those referrers who completed the survey (57%) had only referred one child to the clinic in the past. Two of the three referrers who reported having referred between five and ten children to the clinic indicated positive satisfaction ratings throughout, while the third referrer stopped providing ratings when being asked about treatment aspects of the referred child. Methodologically, it may have been informative to allow referrers who had referred more than one child to indicate whether their satisfaction ratings applied to specific case referrals, rather than giving an estimate across all referred cases. As a final point on methodology, allowing referrers to provide a "Not Applicable" option for individual questions may have prevented premature abandoning of the majority of the survey, as for example in the case of one referrer who did not provide any ratings.

#### **4.4 Conclusion and action points for the clinic**

This survey constitutes the first audit of its kind in the OCD and Related Disorders Clinic, and to our knowledge the first to examine referrer satisfaction in a specialised service for complex and treatment-resistant mental health problems among children and young people. Although satisfaction levels were generally high, the survey has also highlighted a number of interesting issues to be considered by the clinic, in order to continue to provide a competitive National and Specialist service for children and young people affected by OCD and related disorders. These are summarised as action points for the clinic below:

- Continue to develop, distribution and update marketing material for the service, making use of both physical hard copy leaflets and online resources on the internet
- Ensure close liaison with referrers and local services, including the development of a protocol for communication with referrers and training of team members in how to use and follow this protocol practically
- Provide routine follow-up service by telephone, especially when local services are not available to continue to support patients after discharge
- Screen referrals carefully, and avoid sending measures which are not relevant for individual cases, rather than sending a standard package containing all measures
- Continue to reflect on cultural sensitivity among all team members including administrative staff and assistants

- Introduce the clinic team in service brochures and other marketing materials, and describe what referrers and patients should expect from each team member, prior to assessment
- Continue to protect a proportion of time for clinic staff to partake in continued professional development and contribute to research
- Consider the provision of some out-of-hours appointments at the clinic for those who travel long distances to reach the hospital, as well as increasing breadth of treatment in such cases, by addressing emotional, behavioural and family factors, as also highlighted by a previous clinic audit (Robinson & Turner, 2010).

The results of this audit were fed back to the clinic team, and the action points discussed. It is hoped that implementation of these will enable the service to continue to develop and improve the quality of care provided to families affected by OCD and related disorders throughout the UK. A manuscript reporting the results of this audit is also currently in press for the European Journal of Person-Centred Healthcare.

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## 6 Appendix A: Referrer Satisfaction Survey

The National and Specialist Obsessive Compulsive Disorder Clinic for Children and Adolescents

The Maudsley Hospital

Including -

The National Commissioning Group (NCG) Service, for adolescents with severe, treatment resistant, OCD.

### 1. Is your service in

- ☐ London
- ☐ South East England
- ☐ South West England
- ☐ Central England
- ☐ Northern England
- ☐ Wales
- ☐ Scotland
- ☐ Northern Ireland

Other (please specify)

### 2. Do you work in

- ☐ General Practice
- ☐ CAMHS Tier 1
- ☐ CAMHS Tier 2
- ☐ CAMHS Tier 3
- ☐ CAMHS Tier 4
- ☐ Paediatrics

Other (please specify)

### 3. How many children have you ever referred to our service?

- ☐ 1 child
- ☐ 2-4 children
- ☐ 5-10 children
- ☐ >10 children

**4. How did you find out about our service?**

- ☐ Patient provided information and requested referral
- ☐ Local teaching
- ☐ Advertisement for trial
- ☐ Contract with service
- ☐ Service directory

Other (please specify)

**5. Did you find it easy to access information about our service?**

- ☐ Yes
- ☐ No

**6. Did you have any interaction with our service prior to making your referral e.g. e-mail, telephone conversation?**

- ☐ Yes
- ☐ No

**7. If yes, with whom?**

- ☐ Administrator
- ☐ Clinician
- ☐ Don't know

Other (please specify)

**8. How satisfied were you with information provided during this interaction?**

- ☐ Very satisfied
- ☐ Somewhat satisfied
- ☐ Neutral
- ☐ Somewhat unsatisfied
- ☐ Very unsatisfied

**9. Was the child you referred assessed by our service?**

- ☐ Yes  
☐ No

**10. Overall how satisfied were you with**

	Very Satisfied	Somewhat Satisfied	Neutral	Somewhat Unsatisfied	Very Unsatisfied
Wait time to assessment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Treatment recommendations and care plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**11. Was the assessment report**

- ☐ Too short  
☐ Just right  
☐ Too long

**12. Was the child you referred treated by our service?**

- ☐ Yes  
☐ No

**13. Overall how satisfied were you with**

	Very Satisfied	Somewhat Satisfied	Neutral	Somewhat Unsatisfied	Very Unsatisfied
Communication throughout treatment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outcome of treatment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**14. Are you aware that there is a nationally commissioned (NCG) service for adolescents with severe treatment resistant OCD?**

- ☐ Yes  
☐ No

**15. Have you used this NCG service?**

- ☐ Yes
- ☐ No

**16. Overall, How satisfied were you with the experience of referring to the adolescent NCG OCD service?**

- ☐ Very Satisfied
- ☐ Somewhat Satisfied
- ☐ Neutral
- ☐ Somewhat Unsatisfied
- ☐ Very Unsatisfied

**17. Overall, how satisfied were you with the experience of referring to the National and Specialist OCD service?**

- ☐ Very Satisfied
- ☐ Somewhat Satisfied
- ☐ Neutral
- ☐ Somewhat Unsatisfied
- ☐ Very Unsatisfied

**18. Following your experience is there any area that you feel could be improved?**

- ☐ Yes
- ☐ No

**19. Please give details of any changes you feel would improve the service**

**20. Optional**

**Name:**

**Trust/Service**

**Address 1:**

**Address 2:**

**City/Town:**

**Postal Code:**

**Country:**

**Email Address:**

**Phone Number:**

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**Main Research Project:**

**Correlates of adolescent fire setting:**

**Examining the role of fire interest, attentional bias,  
impulsivity and empathy**

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**Supervised by:**

**Dr Troy Tranah &**

**Dr Matt Woolgar**

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## **Abstract**

Little is known about characteristics of adolescent fire setters that may usefully inform clinical practice. The current study sought to investigate correlates of adolescent fire setting behaviour, with specific focus on the role of fire interest, attentional bias towards fire-related material, impulsivity and empathy. In order to isolate characteristics specific to fire setting, as opposed to antisocial behaviour more broadly, three groups of participants were recruited: adolescent fire setters, non-fire setting antisocial adolescents, and age-matched school controls. Participants completed measures of fire interest, impulsivity, cognitive and affective empathy, callous-unemotional traits, as well as a modified lexical fire Stroop task designed to examine attentional bias towards fire-related words. Results suggest that both fire setting and non-fire setting antisocial adolescents were characterised by low cognitive empathy and high uncaring traits. In addition, fire setters were characterised by high impulsivity and high degrees of callousness. Fire setting frequency was best predicted by high impulsivity. Although no Stroop effect emerged that was able to differentiate fire setters from other groups, fire interest correlated with accuracy on the fire Stroop task, across all participants. Clinical implications are discussed, as well as suggestions for future research examining fire setting among adolescent samples.

# **1 Introduction**

## **1.1 Deliberate fire setting: the scope of the problem**

The UK Arson Prevention Bureau reports that in 2003, each week over 2,200 fires were deliberately set in England and Wales, with trends rising over the decade of 1993 to 2003. This suggests a total of 114,000 deliberate fires per year, almost half of which are set by young people under the age of 18. The associated costs of these fires to society are thought to be over £42 million (Arson Prevention Bureau, 2003). Data from the US indicate more than 52,000 arson offences during 2011, resulting in costs upwards of \$680 million (Federal Bureau of Investigation, 2012). Arson as a significant problem with potentially devastating consequences, such as high risk of human fatality and great financial cost of resultant physical damages, also attracted considerable media attention in the UK in August 2011, when several buildings and vehicles were deliberately set on fire by rioting crowds.

Although it is clear that deliberate fire setting represents a considerable social and financial burden, the available empirical literature is limited, lacks coherence and consistent, practically applicable findings on this phenomenon (Doley, Fineman, Fritzson, Dolan, & McEwan, 2011; Gannon & Pina, 2010; Lambie & Randell, 2011). Several authors have highlighted that fire setting remains an underdeveloped area within forensic clinical psychology, as psychological aspects are poorly understood (Burton, McNiel, & Binder, 2012; Gannon & Pina, 2010; Jayaraman & Frazer, 2006). The field is characterised by a lamentable lack

of theoretical frameworks within which to locate principles for assessment and intervention (Gannon, Ó Ciardha, Doley, & Alleyne, 2012). Palmer, Caulfield & Hollin (2007) have pointed out the limitations of currently-available guidelines for systematic interventions for adult fire setters in the UK, since traditionally, literature on treatment has focused on small, detailed case studies of individual psychiatric patients, with little generalizable information about outcome and effectiveness on a wider scale. A further limiting factor is that a vast majority of research on assessment and intervention has been undertaken in North American or Australian contexts, rather than the UK. Overall it appears that, in contrast to many other offending behaviours, research dedicated to exploring and testing novel approaches to assessment and intervention for deliberate fire setting has lagged behind somewhat, and it is clear that further empirical studies of the phenomenon are required (Gannon & Pina, 2010; Caoilte Ó Ciardha & Gannon, 2012).

## **1.2 Defining the problem, problematic definitions**

One difficulty has arisen from inconsistent use of terms applied in the area (MacKay, Feldberg, Ward, & Marton, 2012). 'Fire involvement', in its broadest sense includes a range of dangerous behaviours involving fire, which may be accidental or intentional, lawful or criminal actions (MacKay *et al.* 2012). While lighting fires does not necessarily represent a problematic behaviour, the deliberate and intentional setting of a fire which is unlawful and leads to damage of property, belongings or injury to a person – formally and legally termed arson

- constitutes a criminal offense punishable by law (Burton *et al.*, 2012; Corry, 2002). This definition excludes those individuals considered incapable of forming criminal intentions, such as young children engaging in fire play out of natural curiosity. Although no large-scale normative studies are available, interest in fire expressed through play is considered to be a universal and non-pathological phenomenon during the course of development (Grolnick, Cole, Laurenitis, & Schwartzman, 1990; Pinsonneault, 2002).

Within a psychiatric context, the DSM-IV-TR (APA, 2000) describes fire setting as one of the destructive behaviours characterising children and adolescents with conduct disorder, provided the fire was set with the intention to cause serious damage. Deliberate fire setting has also historically appeared as a core feature of pyromania, initially considered an obsessive compulsive reaction in DSM-I (APA, 1952), and later a disorder of impulsive control from DSM-III onwards (APA, 1980). Diagnostic criteria for pyromania included multiple incidences of intentional fire setting, intense fascination with and attraction to fire and fire paraphernalia, tension or arousal prior to and pleasure, gratification or relief upon witnessing fire. Due to extremely high comorbidity rates and rarity as a distinct disorder however, it has been proposed to remove pyromania from DSM-V (Grant & Won Kim, 2007; Lindberg, Holi, Tani, & Virkkunen, 2005).

Overall, it is likely that differences in definition and assessment of fire setting have contributed to the challenges for empirical studies in this area. Using the legal definition of arson as a parameter for fire setting research is problematic, since it requires that the individual must be formally charged with a crime. By

contrast, others have used a more inclusive definition of unsanctioned fire involvement, which includes behaviours such as match play, lighter play, fire setting, arson and bomb making (MacKay, Ruttle, & Ward, 2012). Inclusion of all instances of fire involvement, however, carries the risk of including non-delinquent and non-pathological behaviours. For the purpose of this dissertation, therefore, problematic fire setting is defined as self-reported deliberate and unsanctioned setting of fire to an object during the past 12 months, irrespective of motivation, and whether or not criminal charges or conviction resulted.

### **1.3 Prevalence of fire setting**

Prevalence studies on deliberate fire setting are often grouped into three categories, those examining adult fire setting in community samples, fire setting among psychiatric and clinical populations, and those investigating fire setting among children and adolescents (Hollin, 2012). The definitional difficulties outlined above directly impact upon estimates of prevalence of all three groups.

#### *1.3.1 Adult community samples*

Using available statistics for cases of convicted arson is likely to underestimate rates of deliberate fire setting, as a large proportion of deliberate fire setting may never result in a formal conviction of arson, due to insufficient evidence, age or other characteristics of the fire setter (Burton *et al.*, 2012; Dickens & Sugarman, 2012). Using statistics for self-reported fire setting, such as those from the large-scale US National Epidemiologic Survey on Alcohol and Related Conditions

(NESARC) based on a sample of over 40,000 participants, prevalence rates for a lifetime history of deliberate fire setting in adults centre around 1%, with 38% of those adults reporting persistent fire setting beyond the age of 15 (Blanco *et al.*, 2010; Vaughn *et al.*, 2010). Interestingly, in a smaller UK-based study (N=158) of self-reported fire setting which allowed participants to respond anonymously, and also excluded non-problematic fire setting (such as bonfires) and fire setting at very young age, 11% reported a lifetime history, and 1.3% reported that their deliberate fire setting continued into adulthood (Gannon & Barrowcliffe, 2012). Although this study's considerably smaller sample is considerably less representative of the general population, it nonetheless suggests that anonymous responding allows higher prevalence rates to be uncovered. These rates may more closely approximate true population estimates of problematic behaviours such as deliberate fire setting.

### *1.3.2 Adult psychiatric and clinical populations*

Prevalence rates among psychiatric populations suggest that approximately 10% of individuals admitted to medium or high secure forensic services in the UK have a history of arson (Coid, Kahtan, Gault, Cook, & Jarman, 2001; Swaffer, Haggett, & Oxley, 2001), with relatively similar findings reported from Finland (Repo, Virkkunen, Rawlings, & Linnoila, 1997) and Sweden (Fazel & Grann, 2002). Reported rates from US state hospitals are considerably higher at 26%-27% (Geller & Bertsch, 1985; Geller, Fisher, & Moynihan, 1992). Vinkers, de Beurs, Barendregt, Rinne, & Hoek (2011) measured associations between specific crime types and mental disorder in the Netherlands, and report a strong relationship between mental ill health and arson. Anwar, Långström, Grann, &



Fazel (2011) noted that those with a diagnosis of schizophrenia were significantly more likely to be convicted of arson than individuals from the general population. Overall, as Tyler and Gannon (2012) have highlighted, the available statistics have not adequately increased our understanding of fire setting behaviours in adult mentally disordered offender populations. While mental ill health may certainly relate to a risk of fire setting, the majority of fire setters do not have a mental disorder, and the literature remains limited with regard to practice guidelines for effective intervention for problematic fire setting in these populations.

### *1.3.3 Children and adolescents*

Of importance for the current dissertation, a relatively large proportion of criminal fire setting is committed by young offenders (Cassel & Bernstein, 2007). Jayaraman & Frazer (2006) noted a changing trend towards younger age groups among court reports for charges of arson, compared to reports analysed approximately 10 years earlier by Rix (1994). Indeed, available arson statistics in the UK suggest that in 2000, approximately 40% of deliberate fire setting offences were perpetrated by young people between 10 and 17 years of age (Arson Prevention Bureau, 2003). Similarly, young people aged 12-17 account for up to 50% of arson arrests in the United States, and for 42-47% in Canada, as summarized by MacKay *et al.* (2012).

Larger-scale prevalence estimates have tended to produce considerably discrepant findings, perhaps due to further variations in methodology, for example the use of caregiver reports for fire setting behaviours in very young

children. Many parents may simply not perceive young people's fire involvement as problematic, even when they are actively but covertly engaged in deliberate and risky fire setting (Del Bove, Caprara, Pastorelli, & Paciello, 2008; Kolko, 1985; Loeber *et al.*, 1993; Pollack-Nelson, Faranda, Porth, & Lim, 2006). Given that match play or fires set without malicious intent are the most prevalent forms of fire involvement in young people (MacKay *et al.*, 2012; Martin, Bergen, Richardson, Roeger, & Allison, 2004) both young people and caregivers may consider this harmless and thus be reluctant to report all incidences of such behaviours. Nonetheless, parental reports for prevalence range between 3% in children between the ages of 4 and 16 years (Achenbach & Edelbrock, 1981; Dadds & Fraser, 2006), 5% in children aged 4 – 6 years, and up to 13.2% in boys aged 7-9 years (Dadds & Fraser, 2006). When stricter inclusion criteria are applied, such as incidents of fire setting with intent to cause serious damage, caregivers' reports of prevalence rates drop to below 1% for both children and adolescents (ages 4-18) (Gelhorn *et al.*, 2009; Lahey *et al.*, 1994).

Using children's self-reports for unsanctioned or unsupervised fire setting during primary and secondary school years, prevalence estimates range from 10.6% (Martin *et al.*, 2004) to 57% (Cole, Schwartzman, Bills, & Crandall, 1986, cited in MacKay *et al.*, 2012; Martin *et al.*, 2004; Simonsen & Bullis, 2001, cited in Fritzson *et al.*, 2011). Among adolescents aged 11 years and older, reports range from 6.3% for at least one unsanctioned fire set during the previous 6 months (Chen, Arria, & Anthony, 2003) to 27% for fire setting during the past 12 months (MacKay, Paglia-Boak, Henderson, Marton, & Adlaf, 2009). Similarly, self-reports of lifetime history of fire setting among a large sample of Italian adolescents

reported by Del Bove *et al.* (2008) suggest a rate of 29% among those aged 11-18 years. Overall, higher rates of fire involvement tend to be reported for younger children than adolescents, arguably due to inclusion of fire and match play during early childhood. It has therefore been suggested that fire setting as a problematic behaviour should be examined among young people aged 12 years and older (Grolnick *et al.*, 1990). Thus, the current dissertation will focus on unsanctioned fire setting among adolescents aged 12-18 years.

## **1.4 Key features of fire setters**

Although this dissertation will examine fire setting among young people, it is useful to first summarize findings from the adult literature with regard to the variables that characterise individuals who engage in dangerous and frequent fire setting. Secondly, previously reported correlates of child and adolescent fire setting will be reviewed.

### *1.4.1 Adult fire setters*

#### **1.4.1.1 Sociodemographic features**

The most consistent finding in this area remains that more males than females engage in fire setting, with estimates of the male : female ratio falling at approximately 6 : 1 (e.g. Blanco *et al.*, 2010; Dickens *et al.*, 2007; Gannon, 2010; Gannon & Pina, 2010; Vaughn *et al.*, 2010). Although Soothill, Ackerley, & Francis (2004) report an increase in female convictions for arson between 1950 and

2000, fire setting remains considered a predominantly male activity, and female arson has to date received considerably less research attention (Gannon, 2010). Interestingly, Swinton and Ahmed (2001) report an exceptionally low male : female ratio of 1.5:1 in their sample of arsonists detained in a high-security psychiatric hospital. This finding, among others which show a relatively low gender ratio, is likely to reflect the fact that women may be more likely than men to be referred to psychiatric services following deliberate fire setting (Dickens & Sugarman, 2012).

Other studies examining socio-demographic characteristics of adult fire setters have suggested differences between those convicted of arson and other offenders such as lower socioeconomic status and unskilled employment (Bradford, 1982; Doley, 2003; Rice & Harris, 1991a; Ritchie & Huff, 1999) and poorer educational achievement during development (Anwar *et al.*, 2011). Similarly, some have suggested that fire setters may be characterised by lower IQ levels relative to non-fire setting criminals (Lewis & Yarnell, 1951; Rice & Harris, 1991a; Saunders & Awad, 1991). However, other authors have contested claims of strong links between arson and below-average intellectual ability and low educational achievement, particularly when comparing arsonists with perpetrators of more violent crimes (Dolan, Millington, & Park, 2002; Labree, Nijman, van Marle, & Rassin, 2010; Pirkko Räsänen, Hirvenoja, Hakko, & Isänen, 1994). Thus, while lower intellectual ability may characterize some fire setters, it is unlikely to be a key feature differentiating this group from other offending groups. Lastly, a number of studies have shown that arsonists in psychiatric samples are likely never to have married and to be living alone (Dickens *et al.*,

2009; Puri, Baxter, & Cordess, 1995; Ritchie & Huff, 1999), irrespective of gender (Bourget & Bradford, 1989). This feature differentiated arsonists from both the general population (Anwar *et al.*, 2011) and other non-fire setting offenders (Rice & Harris, 1991b). This suggests that many fire setters may have considerable difficulties forming or sustaining long-lasting relationships. Again, however, dysfunctional attachment styles, poor interpersonal skills and social functioning are key features for many offenders who do not engage in problematic fire setting (e.g. Frodi, Dernevik, Sepa, Philipson, & Bragesjö, 2001), therefore conclusions from these observations remain limited at present. To date, no studies have systematically evaluated and compared attachment patterns between fire setters and other offender groups.

#### 1.4.1.2 Offending history

Large-scale survey findings such as the self-report data from the US NESARC study suggest that adult fire setters are more likely to engage in a range of offending behaviours than controls, including any activity that warrants police arrest (Blanco *et al.*, 2010). Fire setting may thus represent part of a wide array of offending or antisocial behaviours. Using arson conviction records, Soothill *et al.* (2004) observed that the most common previous convictions for arsonists were theft and criminal damage, followed by violence and motoring offences, with a distinctly low rate of previous conviction for sexual offending. Across a number of other studies examining offence histories of arsonists referred to psychiatric services, arsonists appear to be less likely to be characterised by prior violent criminal offences (Hurley & Monahan, 1969; Jackson, Glass, & Hope, 1987; McKerracher & Dacre, 1966). Hill (1982) concluded that arsonists'

criminal profiles appear more similar to those of property offenders and those committing theft, than those of violent offenders. Lastly, Rice and Harris (1996) examined recidivism data up to 7 years following release for 208 male arsonists, which showed that of those who re-offended, 57% committed non-violent offences, compared to 31% who recidivated violently. Overall then, it appears that violence may be less common among convicted arsonists, although it does occur in some cases, and little is known about what differentiates those who do and do not display patterns of interpersonally violent behaviours.

#### 1.4.1.3 Comorbidity and psychopathology

Among self-reported adult fire setters in the US NESARC survey, significantly higher rates of DSM axis I and axis II disorder emerged, compared to controls (Blanco *et al.*, 2010; Vaughn *et al.*, 2010). In addition, significantly more fire setters reported previous mental health treatment than did controls, which corroborates findings gathered from convicted arsonists with a previous history of psychiatric treatment (e. g. Labree *et al.*, 2010). While alcohol misuse was the most prevalent diagnosis among self-reported fire setters of the NESARC survey, bipolar disorder and anxiety disorders were also significantly more prevalent among fire setters than controls (Blanco *et al.*, 2010). A strong association also existed between fire setting and antisocial personality disorder.

Among samples of convicted arsonists, comorbidity has also been reported to be high, with prevalence rates of personality disorder ranging between 20% and 54% (Bourget & Bradford, 1989; Ritchie & Huff, 1999; Rix, 1994; Swinton & Ahmed, 2001). Lindberg *et al.* (2005) further showed that comorbidity with

antisocial personality disorder was predictive of fire setting recidivism among arsonists. Looking at studies which include a control group of non-fire setting offenders, however, it is not clear that personality disturbances are necessarily more common among arsonists than other criminal groups: Duggan & Shine (2001), Enayati, Grann, Lubbe, & Fazel (2008), Labree *et al.* (2010), Rice & Harris (1991b), Wolford (1972) and Jackson, Hope, & Glass (1987) have all shown comparable rates of personality disorder or psychopathy among arsonists and other offenders. With regard to alcohol and substance misuse, a similar picture emerges, in that prevalence rates appear high among arsonists at first glance (Grant & Won Kim, 2007; Räsänen, Puumalainen, Janhonen, & Väisänen, 1996; Ritchie & Huff, 1999), however this may again not necessarily differentiate arsonists from non-arson offenders (Enayati *et al.*, 2008). Furthermore, as alluded to earlier, diagnoses of schizophrenia or affective disorder (with and without psychosis) are commonly documented among arsonists (Anwar *et al.*, 2011; Enayati *et al.*, 2008; Geller, 1987; Geller *et al.*, 1992; Grant & Won Kim, 2007; Puri *et al.*, 1995; Ritchie & Huff, 1999; Virkkunen, 1974).

A number of authors have considered the role of underlying neuropathology and associated neuropsychological deficits in arson. Predominantly, this has been examined in single case studies, e.g. Bosshart & Capek (2011), Calev (1995), Kanehisa *et al.* (2012) and Shirahama *et al.* (2010), while large-scale studies specifically assessing neuropsychological functioning among arsonists are not available. This is surprising given a growing literature on poor executive functioning in other offender groups with conduct and personality disturbances

(e.g. Morgan & Lilienfeld, 2000). One exception is provided by Dolan and colleagues, who assessed neuropsychological functioning, mood and personality dimensions among matched groups of arsonists, violent and sex offenders (Dolan *et al.*, 2002). Findings showed that arsonists made significantly more perseverative error rates on the Wisconsin Card Sort Test, which suggests lowered cognitive flexibility and poor set-shifting ability, and implicates frontal lobe pathology. Frontal lobe dysfunction, either direct or indirect through disconnection of frontal systems, has also been thought to account for fire setting behaviour in a single case study of a young man presenting with epilepsy described by Kanehisa *et al.* (2012), and a second case of a young man presenting with lacunar stroke reported by Bosshart & Capek (2011). Other, less direct support for the notion that frontal lobe abnormalities may be relevant comes from purported links between arson and diagnosed autism-spectrum disorders, particularly Asperger's syndrome (Barry-Walsh & Mullen, 2004; Enayati *et al.*, 2008; Murrie, Warren, Kristiansson, & Dietz, 2002), a disorder for which specific frontal lobe-based executive difficulties such as low empathy and poor theory of mind have been well documented (Baron-Cohen & Belmonte, 2005; Haskins & Silva, 2006). The particular relevance such empathy deficits may have for problematic, deliberate fire setting will be discussed in more detail in Section 1.5.3.



## 1.4.2 *Child and adolescent fire setters*

### 1.4.2.1 Sociodemographic and family factors

As is the case in adult arsonist samples, young males consistently outnumber females with regard to prevalence of fire involvement and fire setting, ranging from female : male ratios of 1:3 to 1:6 (e.g. Chen *et al.*, 2003; Dadds & Fraser, 2006; Kolko, Day, Bridge, & Kazdin, 2001; MacKay *et al.*, 2012; MacKay *et al.*, 2009; Martin *et al.*, 2004; Showers & Pickrell, 1987). It has been suggested that this gender difference emerge early on in childhood (Dadds & Fraser, 2006), and that girls may be more likely to initiate their fire setting at an older age, compared to boys (Grolnick *et al.*, 1990). Across both male and female adolescents, Thomas, Mackay, & Salsbury (2012) have noted that a number of young fire setters engaged in a specialist arson prevention programme report exposure to examples of dangerous fire setting behaviours on the internet, for example on amateur video sharing websites such as YouTube.

In terms of additional factors, it has been suggested that relative to non-fire setters, children who set fires are more likely to originate from either single-parent households (Pollinger, Samuels, & Stadolnik, 2005; Root, Mackay, Henderson, Del Bove, & Warling, 2008) or large families of low socioeconomic status (Heath, Hardesty, Goldfine, & Walker, 1983), although this has not been consistently replicated (Showers & Pickrell, 1987). What has emerged from across a number of studies, however, are findings that fire-setting children and adolescents are more likely to have experienced neglectful or harsh and punitive parenting patterns (McCarty & McMahon, 2005; Sakheim & Osborn, 1999; Showers & Pickrell, 1987) or physical or sexual abuse (Bailey, Smith, & Dolan,

2001; Becker, Stuewig, Herrera, & McCloskey, 2004; Dadds & Fraser, 2006; McCarty & McMahon, 2005; Moore, Thompson-Pope, & Whited, 1996; Root *et al.*, 2008; Showers & Pickrell, 1987). It is not clear, however, to what extent these factors differentiate young fire setters from other offending groups, given that maltreatment is a general risk factor for offending in later life (e.g. Stouthamer-Loeber, Loeber, Homish, & Wei, 2001). Interestingly, Martin *et al.* (2004) showed that after controlling for antisocial behaviour, family dysfunction no longer contributed independently to fire setting behaviour, supporting the notion that family dysfunction confers a risk for antisocial behaviours generally, but not necessarily fire setting specifically. Similarly, mixed findings have been reported with regard to parental functioning and fire setting recidivism, with some data showing that family measures may predict recidivistic behaviour (Kolko & Kazdin, 1992), whilst more recent studies have failed to replicate this effect (Kolko *et al.*, 2001; Kolko, Herschell, & Scharf, 2006).

Given these inconsistencies with regard to variables such as family size, functioning or parenting style, the current dissertation therefore focuses on individual sociodemographic factors that consistently emerge as important, such as male gender and age, rather than more systemic factors.

#### 1.4.2.2 Comorbidity

Importantly, Root and colleagues propose that the link between developmental abuse and adolescent fire setting is at least partially mediated by the affective and behavioural difficulties likely to result from such abuse (Root *et al.*, 2008). Indeed, in community samples, fire setting has been linked with a number of

symptoms of depression, attention-deficit/hyperactivity disorder, a range of conduct problems (Becker *et al.*, 2004; Kolko & Kazdin, 1991a; Kolko, Watson, & Faust, 1991; Kuhnley, Hendren, & Quinlan, 1982; Sakheim & Osborn, 1999), and among girls particularly, internalizing problems such as anxiety and depression were closely linked with fire setting (Dadds & Fraser, 2006). Additional factors of relevance proposed for fire setting among adolescents are those pertaining to poor impulse control, such as risk taking, alcohol and substance misuse and thrill-seeking temperament (Dadds & Fraser, 2006; Kolko & Kazdin, 1991a; MacKay *et al.*, 2009; Martin *et al.*, 2004; McCarty & McMahon, 2005; Sakheim & Osborn, 1999). Del Bove *et al.* (2008) also observed that aggressive fire setters were more likely to report self-regulatory deficits. In terms of relevant concurrent problems and diagnoses, similarly to adult arson cases, Asperger's syndrome has been identified as important in some cases of adolescent arson (e.g. Everall & LeCouteur, 1990).

Overall, fire setting is frequently conceptualized as an advanced type of antisocial behaviour, and as described earlier, constitutes one of the diagnostic criteria for conduct disorder as currently specified in DSM-IV-TR (APA, 2000) (see Section 1.2). Indeed, several studies have highlighted that conduct disorder appears to be the most common diagnosis offered to young people who engage in deliberate fire setting (Becker *et al.*, 2004; Dadds & Fraser, 2006; Forehand, Wierson, Frame, Kemptom, & Armistead, 1991; Kolko & Kazdin, 1989; Kolko & Kazdin, 1991b; MacKay *et al.*, 2006; McCarty & McMahon, 2005; Repo *et al.*, 1997). Furthermore, Gelhorn *et al.* (2009) have shown that fire setting can be used to identify youth with severe levels of conduct disorder, and similarly Kelso

and Stewart (1986) report that fire setting is linked to poor outcomes in boys with aggressive conduct disorder. Three additional studies examining fire setting among adolescents with problematic conduct suggest that young fire setters are likely to exhibit more extreme antisocial traits, after controlling for the presence of conduct disorder (Becker *et al.*, 2004; Martin *et al.*, 2004; Stickle & Blechman, 2002). Taken together, these results appear to imply that fire setting behaviour flags those individuals characterized by the most extreme antisocial pathology. It is noteworthy, however, that conduct disorder itself has not been found to be a strong predictor of recidivism among convicted juvenile arsonists (Repo *et al.*, 1997). Also of note is Jacobson's (1985) observation that only a relatively small minority (5.5 %) of sampled adolescents with conduct disorder engaged in problematic, repetitive and severe fire setting. Thus, despite close links between antisocial behaviour broadly, and fire setting specifically, other variables need to be examined to understand fire setting as a problematic behaviour. These will be discussed in more detail, as relevant to the study presented in the current dissertation.

## **1.5 Individual factors**

### *1.5.1 Fire interest*

A number of other factors relevant to fire setting have begun to be examined in recent years. Given the complexity of the phenomenon, a multidimensional approach to assessment and intervention is likely to be required, incorporating intent, social context, social and emotional reactions, and understanding of the

consequences of fire setting. Indeed, while earlier fire setting inventories for young people focused predominantly on assessing fire-related risk (e.g. Kolko & Kazdin, 1989; Sakheim & Osborn, 1994), more recent approaches have adopted increasingly more sophisticated approaches, exploring fire setter's mental health needs, perceptions of events, feelings and cognitions prior to and after the incidence (Clare, Murphy, Cox, & Chaplin, 1992; Humphreys & Kopet, 1996; Leong & Silva, 1999; Murphy & Clare, 1996). These investigations can be linked back to issues of risk by isolating specific aspects of fire setting behaviour such as severity, frequency and recidivism rates. This is important, given that recidivism rates range from 15% among young arsonists referred for psychiatric evaluation (Repo & Virkkunen, 1997), to as high as 50% among youth who have undergone a specific intervention targetting fire setting behaviour (Adler, Nunn, Northam, Lebnan, & Ross, 1994; Kolko *et al.*, 2001; Kolko *et al.*, 2006).

Recidivism in adolescent fire setting has been reviewed by Kennedy, Vale, Khan and McAnaney (2006) and more recently Lambie and Randell (2011), both of whom confirmed the importance of antisocial behaviour, as discussed above. In addition, these reviews have highlighted an important role of fire interest in fire setting recidivism. Across a number of studies, Kolko and colleagues have shown that parental ratings of children's fire interest can differentiate between children who engage in repeated fire setting and those who do not (Kolko & Kazdin, 1991b, 1992; Kolko & Kazdin, 1994). Irrespective of intervention condition, Kolko *et al.*'s (2006) outcome study showed that level of fire attraction, interest and curiosity were predictive of whether or not children's fire setting recurred within a 12-month follow-up period. A strong link between fire interest and

problematic fire setting is also supported by studies from the arson literature, which show that fire interest during childhood predicts both adolescent and adult arson (Hanson, Mackay-Soroka, Staley, & Poulton, 1994; Rice & Harris, 1991b).

For the purpose of the current dissertation, two additional recent studies are noteworthy: Firstly, MacKay *et al.*'s (2006) data show that fire interest could predict both recidivism over 18-months, and severity of fire setting among adolescents, accounting for variance over and above that accounted for by fire setting history and antisocial behaviour. Severity in this study was defined by frequency and versatility in fire setting behaviour, such as use of a range of materials. These authors suggest that fire interest may predict fire setting *specifically*, rather than antisocial behaviour in general, although they highlight the need for additional studies to further test this hypothesis. Secondly, Gallagher-Duffy, MacKay, Duffy, Sullivan-Thomas and Peterson-Badali (2009) approached the measurement of fire interest in a novel manner, by using a modified, pictorial Stroop task to assess information processing bias for fire-related stimuli among adolescent male fire setters. Their results indicate a greater attentional bias towards fire-related images among fire-setters than non-fire setting young offenders. This attentional bias was also related to self-reported frequency of fire setting, however it was not positively related to fire *interest*, as indexed by scores on the Fire Interest Questionnaire (FIQ; MacKay & Hanson, 1996; MacKay *et al.*, 2006). This group's 2009 Stroop task study was the first to use a non questionnaire- or interview-based assessment of fire interest.

The relevance and potential value of such implicit measures of cognition will be discussed in more detail in Section 1.7.

### *1.5.2 Impulsivity*

Few studies have attempted to directly measure impulsivity as a distinct aspect of problematic behaviour among fire setters. Typically, studies have used parental, teacher or peer-ratings, frequently using composite scores of impulsivity derived from a number of subscales of hyperactivity measures. Using this method, McCarty and McMahon (2005) showed that these composite scores were higher for fire setting than non-fire setting youth. Similarly, Kolko and Kazdin (1991a) showed that parental or teacher report of a combined impulsive/recalcitrant subscale was elevated for fire setters but did not differentiate fire setters from those engaged in match play only. The use of composite scores for assessment is questionable, however, in terms of validity. In psychiatric context across an age-range including children as well as adults of fire setters in residential or inpatient treatment, Sakheim and Osborn (1999) also report that clinician-rated impulsivity and loss of inhibition differentiated severe from non-severe fire setters. Interestingly, Kolko and Kazdin (1992) used the Matching Familiar Figures Test to assess children's degree of impulsivity more directly, and found no differences between fire setters and non-fire setters, nor was impulsivity associated with fire setting recidivism. Thus, studies measuring impulsivity have produced mixed results, and are characterised by a lack of psychometrically valid and reliable measurement of impulsivity.

### *1.5.3 Empathy and the potential relevance of callous/unemotional traits*

Despite many difficulties with its conceptualization and measurement (e.g. Jolliffe & Farrington, 2004), empathy as a socio-cognitive skill is an enticing construct in the forensic literature, holding a hopeful promise to increase our understanding of offending and antisocial behaviour. In particular, the construct of empathy has become the focus of many empirical studies of sexual offending. The literature often draws a distinction between cognitive and affective empathy, as well as more generic trait empathy and specific victim empathy (see Barnett & Mann, 2013, for a recent review), and the majority of treatment programmes aimed at reducing re-offending include interventions to enhance victim empathy (Marshall, O'Sullivan, & Fernandez, 1996). These are often considered to be among the most powerful components of the intervention, as reported by offenders themselves (Levenson, Macgowan, Morin, & Cotter, 2009; Levenson & Prescott, 2009; Wakeling, Webster, & Mann, 2005). In striking contrast to such reports, (Hanson & Morton-Bourgon's (2005) recent meta-analysis examining data from almost 30,000 sexual offenders showed that victim empathy has little predictive validity for sexual or violent recidivism. To account for such discrepancies, Barnett and Mann (2013) urge for more sophisticated conceptualizations and consistent assessment of victim empathy, cognitive and affective aspects of trait empathy, as well as additional factors which may be relevant, such as the ability to label and manage distressing personal emotions.

The role of low empathy in problematic fire setting, by comparison, is significantly under-investigated, and as a result is even less clear (Doley *et al.*, 2011). This relative neglect of empathy in problematic fire setting is somewhat



surprising, given the frequent associations with antisocial behaviour patterns outlined earlier. Indeed, Lambie & Randell (2011) have highlighted that while the relationship between fire setting behaviour and more extremely antisocial behaviours has important implications for services working with these adolescents, there remains an alarming lack of attention to this issue in current research and practice guidelines concerning fire setters.

Jayaraman and Frazer (2006) reviewed a case series of 34 adult arsonists, and found victim empathy to be absent in 10 and partially present in 17 cases. Similarly, Sakheim and Osborn (1999) report that lack of empathy and demonstration of cruelty towards others and animals (as evidenced by psychiatric report) distinguished severe from non-severe juvenile arsonists. Importantly, both of these studies did not measure empathy through self-report, but rather review of court or clinical documents. A link between childhood cruelty to animals and fire setting has however also been shown in a number of other studies, which used either self-ratings using a validated scale, parental report or personality measures such as the Minnesota Multiphasic Personality Inventory to capture animal cruelty (Dadds & Fraser, 2006; Moore *et al.*, 1996; Slavkin, 2001). In contrast to these findings, Rice and Harris (1996) found no relationship between animal cruelty and arson recidivism. Of course, the presence of animal cruelty itself does not directly provide direct evidence regarding an individual's particular empathy skills. Although low empathy is a strong contender for mediating associations between animal cruelty and antisocial and violent behaviours (e.g. McPhedran, 2009), no consistent evidence exists for inevitable progression from one to the other (Beirne, 2004). What is of

relevance for the field of fire setting research, however, is that to date only one study has measured empathy directly (Walsh, Lambie, & Steward, 2004). These authors compared adolescents with problematic fire setting to age-matched controls with behaviour difficulties on self-rated scores on the Bryant Index of Empathy for Children and Adolescents (Bryant, 1982), and report low levels of empathy generally, and no significant difference between groups. Unfortunately the authors do not provide mean values for this measure, thus making it difficult to replicate this finding. An additional difficulty with this index is that it assesses primarily affective aspects of empathy, as well as poorly differentiating between empathy and related constructs such as sympathy (Jolliffe & Farrington, 2006).

To date, no study has directly measured cognitive and affective components of empathy among fire setters, despite evidence that these may be separately measurable processes, with differing degrees of relevance to different behaviour problems (e.g. Jolliffe & Farrington, 2006; Lovett & Sheffield, 2007). For example, it has been suggested that deficits in affective rather than cognitive empathy may be important in the development of psychopathic features (e.g. Brouns *et al.*, 2013; Dadds *et al.*, 2009). Intervention programmes aimed at increasing empathic abilities may benefit from refining treatment by targeting specific deficits among offenders. As perpetrators may not be physically present at an arson crime scene to observe the consequences of their fire setting, cognitive empathy skills such as perspective taking may be particularly important.

Similarly, despite the fact that a number of authors have described fire setting behaviours as indicative of severely antisocial traits among youth (Becker *et al.*,

2004; Martin *et al.*, 2004; Stickle & Blechman, 2002), no studies have measured constructs which may account for such antisociality, such as callous and unemotional traits (Fanti, 2013; Frick & White, 2008), among fire setters. These characteristics have been examined in relation to empathy among adolescent offenders generally, irrespective of offence type, which showed that callous-unemotional traits were related to both cognitive and affective empathy ratings (Pardini, Lochman, & Frick, 2003). Among children with conduct disorder and high callous-unemotional traits, poor affective empathy but intact cognitive empathy skills have been shown (Anastassiou-Hadjicharalambous & Warden, 2008). Muñoz, Qualter and Padgett (2011) demonstrated that high degrees of “uncaring” traits predicted specific deficits in cognitive empathy. To date, these relationships have not been examined among fire setters.

## **1.6 Overview of the most influential theoretical models of fire setting**

From the review presented so far, it is evident that great heterogeneity exists among fire setters. Existing theoretical frameworks have focused predominantly on typological classification, in an attempt to reduce the heterogeneity of fire setters by fitting individuals into motivational categories. One of the earliest and most influential of these was provided by Lewis and Yarnell (1951), who proposed four categories of adult fire setters: unintentional (e.g., through temporary confusion), delusional, motivated by erotic pleasure (e.g., pyromania-traits or sexual pleasure), and to exert revenge. Similar, at times more and other times less expansive typologies followed from this first taxonomy, such as for

example Inciardi's (1970) proposed set of six fire setter categories: revenge, excitement, institutionalized (i.e., fire setting in mental health facilities in order to be relocated), motivated by insurance claims, vandalism (i.e., fire setting for fun), and crime concealment. Harris and Rice (1996) employed a more statistically robust cluster analysis to classify their sample of male arsonists in a psychiatric context, which arrived at four categories - psychotic fire setters, unassertive fire setters, multi-fire setters and criminals. Canter and Fritzon (1998), using an action systems framework applicable to a range of criminal behaviours, proposed a behavioural typology based on expressive or instrumental motivation, directed at objects or person, which results in four categories of fire setting, accordingly. Del Bove and Mackay (2011) have recently proposed a novel, empirically-derived classification system to account for heterogeneity, which resulted in three subgroups of fire setters, with differing degrees of severity of fire setting: conventional (limited severity), home-instability (moderate severity) and multi-risk (persistent, high severity) fire setters. "Conventional" fire setters were characterized by low frequency of fire setting and low levels of fire interest, and few had antisocial motivations for setting fire. Youth in the "home instability" cluster were characterised by more frequent incidences of fire setting and increased fire interest, earlier onset, as well as poor parental involvement or experience of parental abuse. Lastly, those in the "multi-risk" group showed high frequency and high fire interest, high levels of parental abuse, and the highest level of social skills deficits, attentional difficulties and externalizing behaviours. As Gannon *et al.* (2012) have pointed out, with notable exceptions in the recent literature, many early proposed typologies are limited as little information about inter-rater reliability for

classification decisions is provided. Perhaps most importantly, many of these classification systems propose one dominant motivational factor for fire setting behaviour, leaving little room for viewing fire setting as a complex and multifaceted phenomenon, even within individuals (Prins, Tennent, & Trick, 1985). Lastly, these typologies are not informative with regard to the psychosocial risk factors which may link with individuals' proposed motivations.

Using a functional analysis framework, adult fire setting has also been viewed as the 'only viable option' behaviour, in an account outlined by Jackson and colleagues (Jackson, Glass, *et al.*, 1987). Here, fire setting is viewed as the result of a complex set of antecedents such as psychosocial disadvantage, life dissatisfaction, social ineffectiveness, factors determining individual experience of fire and internal or external fire setting triggers, and reinforcement contingencies which maintain fire setting behaviours, such as increased attention from others or increase in perceived power. Although this behavioural framework represents a progression from typology models, it is noteworthy that many of the antecedent and reinforcing variables are applicable to many offending behaviours, and may thus not be specific enough to account for problematic fire setting.

Similarly to Jackson's functional analysis approach, Fineman's dynamic behaviour theory (Fineman, 1995) views fire setting as a consequence of historical factors which predispose to antisocial behaviour generally, reinforcement contingencies which lead to fire setting as a specific subset of such behaviour, and environmental contingencies which reinforce specific instances

of fire setting. This model has proved highly influential for informing clinical practice (Kolko, 2002), as it allowed both motivational classification into seven subtypes of fire setters (curiosity, accidental, cry-for-help, delinquent, severely disturbed, cognitively impaired and sociocultural fire setter, for example with a religious or political motivation), and was accompanied by a set of clinical guidelines for systematic assessment of fire setters.

Lastly, and most recently, Gannon *et al.* (2012) have provided a multi trajectory theory to account for adult fire setting, which aims to integrate current taxonomies, theoretical accounts and empirical findings. Five key trajectories and associated risk factors and clinical features are outlined: an antisocial, grievance, fire interest, emotionally expressive/need for recognition, and a multi-faceted trajectory. Although this theoretical account has been developed predominantly to account for adult fire setting, developmental contexts are well acknowledged. At present, the multi-trajectory theory of adult fire setting (M-TTAF) appears to account well for a range of previous findings, although further empirical validation is required, particularly with regard to specific aspects of offenders' cognition (Gannon *et al.*, 2012), and potential commonalities between proposed trajectories.

## **1.7 Implicit measures of cognition in offending research**

Given that deliberate and problematic fire setting is often covert, self-report data are likely to be most relevant for increasing our understanding of this behaviour.

Particularly in forensic contexts, however, self-reported questionnaire measures or interview data may be problematic to interpret, due to problems with item transparency, willingness to respond as well as other types of response bias which may occur in the context of court proceedings. These limitations have prompted the development of a number of measures which need not rely on direct and explicit verbal report from individuals, often collectively termed ‘implicit’ measures of cognition (Fazio & Olson, 2003). Most frequently, priming paradigms or implicit association tasks are used, in which typically, reaction times (RT) are measured. Faster responding is considered to reflect a facilitation of information processing relevant to an already-existing schema the individual holds, while slowed RTs reflect interference in evaluatively incongruent trials. In the fields of psychopathology and also increasingly in forensic research, this type of implicit cognition assessment has been used in the form of a modified Stroop paradigm (Stroop, 1935), sometimes also referred to as ‘emotional’ Stroop task. In this task, participants are presented with both neutral stimuli and stimuli relevant to the construct under investigation (i.e. experimental stimuli), and asked to name the stimulus colour as fast as possible (MacLeod & MacDonald, 2000). Increased RTs and lowered accuracy for experimental stimuli are thought to reflect an attentional bias towards the underlying schema of interest. Williams, Mathews, & MacLeod’s (1996) review showed that the observed RT interference effects were greatest for experimental stimuli relevant to individuals’ emotional disturbance, for example spider-related stimuli causing particular interference effect for spider phobics, trauma-relevant stimuli for sufferers of post-traumatic stress disorder, etc.

Five studies have utilized the modified Stroop task with offender populations. Smith and Waterman (2003) demonstrated a Stroop/interference effect for aggression-themed words among both violent offenders and also among a group of non-offenders who rated themselves high for anger on a self-report measure. Extending this design to include groups of violent and sexual offenders, both Smith & Waterman (2004) and Price and Hanson (2007) showed the anticipated Stroop effects of slowed RTs for sexually-themed words compared to neutral words, although this difference did not reach statistical significance in Price & Hanson's study. Two studies have used a pictorial version of the modified Stroop, the first of which used images of adults and children as experimental stimuli to assess interference effects among sex offenders (Ó Ciardha & Gormley, 2012). Results showed that Stroop effects did not differentiate offenders from non-offenders, however the RT patterns suggest that the task was able to tap into sexual interests among all participants. This highlights the need for greater specificity when choosing experimental stimuli (see also Price, Beech, Mitchell, & Humphreys, 2011). The last and only study to date to have used the modified Stroop task in a fire setting sample is that by Gallagher-Duffy and colleagues (2009), who used fire-related and neutral drawings to successfully elicit the Stroop effect, as described earlier (Section 1.5.1).

## **1.8 Summary and aims of the current study**

Deliberate problematic fire setting is a complex and most certainly multidimensional behaviour, associated with great costs to many societies each



year. The current knowledge-based is significantly limited when compared to other areas of offending research, despite clear relevance to clinicians and practitioners who work with adolescent fire setters both at assessment and intervention level, such as those in mental health and youth offending services, fire and rescue services, prisons and probation services. For assessment and intervention delivered by UK services and organisations, limitations exist due to the fact that the majority of research on assessment and intervention has been undertaken in North American or Australian contexts (Palmer *et al.*, 2007). Outside of the UK, many mental health workers also do not feel adequately trained to work with juvenile fire setters (Sparber, 2005).

Many characteristics of fire setting have previously been proposed, however few of these can be considered specific to fire setting, as opposed to general antisocial behaviour. This difficulty is predominantly due to the predominantly correlational nature of many studies of adolescent fire setting, or a lack of inclusion of adequate control groups. Fire interest appears to have been most frequently associated with fire setting, either as a factor distinguishing fire setters from non-fire setters, or as predictor variable for recidivism. Studies have tended to measure both fire interest and recidivism dichotomously (i.e. judged as present or absent from interview data), while examining fire interest along a continuous scale has only been a feature of relatively recent studies (MacKay *et al.*, 2012). Similarly, methodological advances have been made in other areas of offending, for example the use of implicit measures of cognition, whilst only one such study has been conducted with adolescent fire setters. Gallagher-Duffy *et al.* (2009) used a pictorial, modified fire-related Stroop task to demonstrate

attentional bias towards fire-related images among fire setters. Although pictorial stimuli may be useful for eliciting a fire-related attentional Stroop effect, extending this paradigm using a lexical version of the task would serve to examine the robustness of the reported attentional bias effect. Lexical Stroop tasks are currently the most frequently used version of the modified Stroop, primarily because more control over stimulus features is afforded in lexical tasks compared to pictorial stimuli. It has been suggested that measures such as attentional bias tasks can enhance assessment of offenders' cognition, due to the fact that less conscious censoring occurs during these tasks, compared to explicit verbal report given in interviews or questionnaires. Therefore, one aim of the current study was to design and test a lexical version of the fire-Stroop task to examine attentional bias towards fire-related words among adolescent fire setters. A second, related aim was to evaluate the relationship of this attentional bias to self-reported fire interest.

Thirdly, the current study seeks to extend previous research by examining the relationship between fire setting frequency and three individual clinical factors previously reported to be of potential relevance, namely empathy, callous unemotional traits and impulsivity, which plays a central role in many accounts of antisocial behaviour and developmental pathways to offending (Farrington, 1995; Moffitt, 1993). Despite arson having been classified as a disorder of impulse control until quite recently (see Section 1.2), impulsivity as a personality trait among fire setting youth has rarely been systematically investigated, despite its potential relevance for developing treatment, educational and training programmes (Doley & Watt, 2012). The present study furthermore

seeks to measure cognitive and affective empathy among adolescent fire setters, in an attempt to extend the findings presented by Walsh and colleagues (2004), who administered the Bryant index of empathy to fire setting and non-fire setting adolescents and reported comparable levels of empathy. This finding stands somewhat in contrast with previous reports, however, it is noteworthy that previous studies did not administer psychometrically validated scales to rate empathic ability. Lastly, callous unemotional traits will be measured, which have been previously seen to relate differentially to cognitive and affective components of empathy, however this has never been examined among fire setters.

A fourth and final aim of this study is to identify of predictors of severity of fire setting among young people, as defined by frequency of unsanctioned fire setting over the period of the previous 12 months.

## **1.9 Hypotheses**

- 1) Fire setting adolescents differ from non-fire setting adolescents on self-reported fire interest.
- 2) Fire setting adolescents will show an attentional bias towards fire-related words on the modified fire Stroop task.

3) Attentional bias towards fire-related words will show a positive correlation with fire interest and frequency of fire setting.

4) Fire setting frequency will be predicted by a combination of fire interest, high impulsivity, low empathy and high rates of callous unemotional traits. This hypothesis will be tested using a step-wise regression model.

## **2 Method**

### **2.1 Ethics**

Ethical approval was granted by the NHS North East - Northern & Yorkshire Research Ethics Committee (reference 12/NE/0032). Research and Development approval was granted by the South London and Maudsley R&D committee (reference R&D2012/035) and the CAMHS research committee of the South London and Maudsley NHS foundation trust on. Ethical approval was also sought from the Psychiatry, Nursing and Midwifery Research Ethics Subcommittee of King's College London, which was granted (reference PNM/11/12-93). Please see Appendix A for approval documentation for all applications made.

### **2.3 Participants**

Three groups of participants took part in this study:

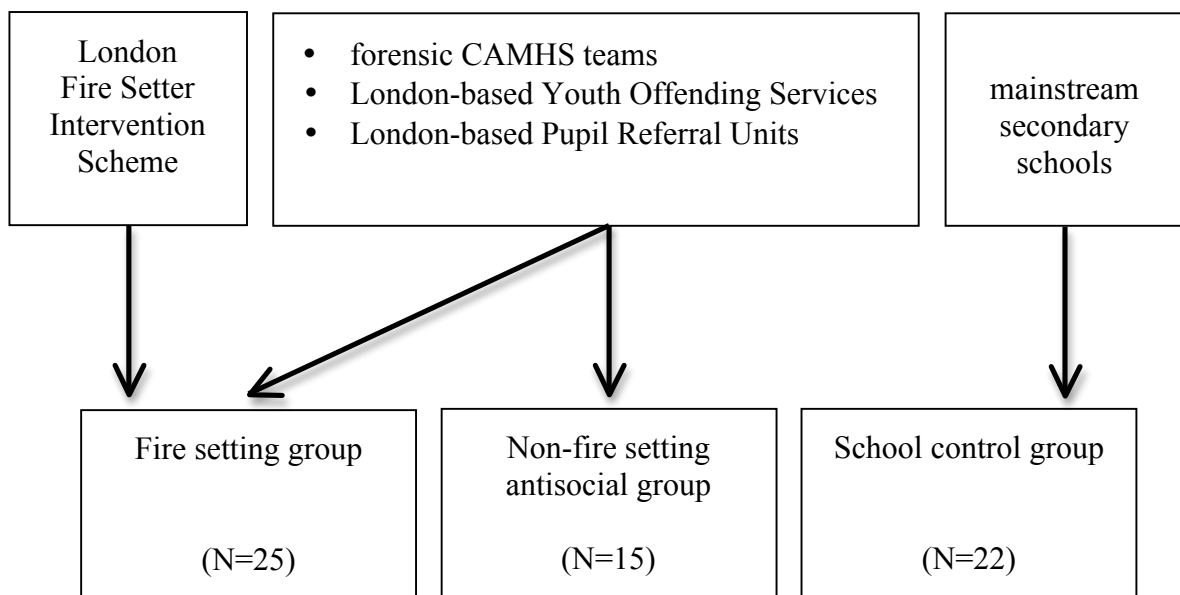
- I. A group of adolescents aged 12-18 years with a history of active fire setting during the previous 12 months (fire setting group, n=25),
- II. a group of adolescents aged 12-18 years with a history of antisocial behaviour but no history of fire setting during the previous 12 months (non-fire setting antisocial group, n=15),

- III. a control group of adolescent mainstream school attenders aged 12-18 years with no history of fire setting during the previous 12 months (school control group, n=22).

In addition to the above inclusion criteria, participants were excluded from the study if they were not native English speakers, had a diagnosis of learning disability or pervasive developmental disorder, or were currently experiencing an episode of florid psychosis.

## **2.4 Recruitment**

Power analysis based on a set of raw data from the pictorial fire Stroop kindly supplied by Gallagher-Duffy and colleagues from their 2009 study indicated that a sample size of 15 in each group would have 80% power to detect a difference in means of 24.9ms between fire setters and controls, assuming a common standard deviation of 23.0ms, using a two group t-test (effect size=1.083). To maximise recruitment, potentially eligible participants were recruited from multiple sources, as illustrated in Figure 1. Fire setting adolescents were recruited from the Juvenile Fire Setter Intervention Scheme of the London Fire Brigade, as well as local forensic CAMHS services, Youth Offending Services and Pupil Referral Units which provide education to adolescents excluded from mainstream schools due to behavioural problems, most frequently relating to conduct difficulties. Non-fire setting antisocial participants were also recruited from forensic CAMHS, Youth Offending Services and Pupil Referral Units. School controls were recruited from mainstream secondary schools. Appendix B shows letters sent to gatekeeper organisations and services.



**Figure 1: Recruitment sources**

Participants were initially approached by a staff member of the service or organisation from which they were recruited, and subsequently contacted by the researcher to arrange a suitable testing session. Fire setting behaviour was identified from referral and case notes, and verified with each individual using the final question of the TAPP-C Fire Interest Questionnaire, which asks participants “In the last 12 months, how many times have you set something on fire that you weren’t supposed to?”

## 2.5 Measures

### 2.5.1 Word Reading subtest of the Wechsler Individual Achievement Test (WIAT-II)

The WIAT-II reading subtest (Wechsler, 1992) was used to screen participants’ level of single word reading, to ensure adequate and comparable reading ability among

participants (see Appendix C). This is important as differences in reading skill may affect Stroop performance (Mutter, Naylor, & Patterson, 2005). The WIAT-II subtest was chosen because it can be administered quickly (administration time does not exceed 5 minutes), and is well standardized for use with adolescents in a UK context. Reading raw scores are converted to standard scores with a mean of 100 and standard deviation of 15. Age-equivalence scores can also be derived.

### *2.5.2 Fire Interest Questionnaire (TAPP-C FIQ)*

With kind permission of the authors, the self-rated TAPP-C Fire Interest Questionnaire published by The Arson Prevention Programme for Children (MacKay & Hanson, 1996, see Appendix C) was used to assess interest in fire and fire-related materials. A fire interest score is derived from rating the applicability of 18 items (e.g. "I talk about fire.") on a 4-point Likert scale, ranging from 0 ("Not at all") to 3 ("Very much"). Scores range from 0 - 54. Participants are also asked to rate frequency of fire setting behaviour during the past 12 months, as well as age of onset of fire setting. The FIQ has been reported to have good internal consistency, with Cronbach's  $\alpha = 0.89$  (MacKay *et al.*, 2006). Although it has not previously been administered to a UK sample, it was chosen as the preferred measure to assess fire interest because its psychometric properties have been shown to be superior to those of other previous indices of fire interest, which are often interview-based.

### *2.5.3 Barratt Impulsiveness Scale (BIS-11)*

The Barratt Impulsiveness Scale (Patton, Stanford, & Barratt, 1995) is a 30 item self-report instrument designed to assess cognitive impulsiveness, motor impulsiveness and non-planning impulsiveness (Barratt, 1985). This was chosen because it is the most



widely-used measure of impulsivity, well-validated and with good internal consistency (Cronbach's  $\alpha = 0.83$ , Stanford *et al.*, 2009). It has been adapted for use with adolescents (Fossati, Barratt, Acquarini, & Di Ceglie, 2002), where Cronbach's  $\alpha = 0.78$ . It takes approximately 5-8 minutes to complete (see Appendix C). Studies have shown moderate to high effect sizes in differentiating offenders from controls using the adult version (Patton *et al.*, 1995; Smith, Waterman, & Ward, 2006). The originally-proposed 3-factor structure was not replicated in larger sample recently (Ireland & Archer, 2008), therefore only total BIS scores were analysed in the current study.

#### 2.5.4 *Basic Empathy Scale (BES)*

The BES (Jolliffe & Farrington, 2006, see Appendix C) is a 20-item self-rated scale which assesses cognitive and affective empathy among adolescents. It was developed specifically to address shortcomings of previous measures, such as overlap between sympathy and empathy, and unsatisfactory differentiation between empathy and social desirability. It has been well validated using a large UK adolescent population, with good overall reliability (Cronbach's  $\alpha = 0.87$ ), and Cronbach's  $\alpha$  of 0.79 for the cognitive scale and 0.85 for the affective scale (Jolliffe & Farrington, 2007). Items are rated for agreement on a 5-point Likert scale, with higher scores reflecting higher empathy levels, ranging from 20-100. Completion time does not exceed 5 minutes.

#### 2.5.5 *Inventory of Callous-Unemotional Traits (ICU)*

The ICU (Frick, 2004, see Appendix C) is a 24-item self-rated questionnaire designed to provide a measure of callous and unemotional traits among adolescents. It has three subscales - callous, uncaring, and unemotional - and maximum completion time is

approximately 5-6 minutes. Participants rate agreement with the 24 statements on a Likert scale ranging from 0 (“Not at all true”) to 3 (“Definitely true”), with total scores ranging from 0 – 72. Good reliability has been reported for the ICU, with Cronbach’s alpha = 0.83 for total score, 0.79 for callousness, 0.77 for the uncaring subscale, and 0.73 for the unemotional scale (Roose, Bijttebier, Decoene, Claes, & Frick, 2010).

#### 2.5.6 *Fire Stroop task*

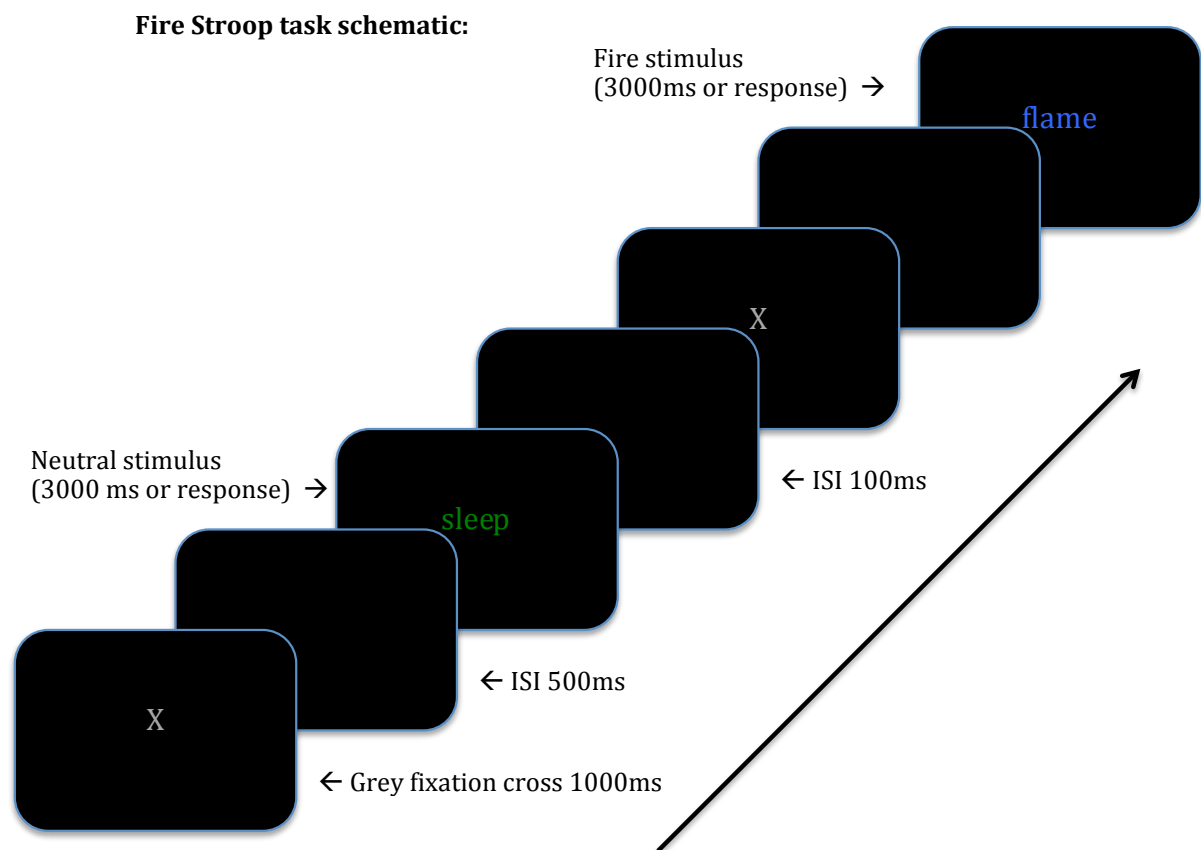
Larsen, Mercer, & Balota (2006) have outlined limitations of previous modified Stroop tasks in terms of choice of experimental stimuli, and urge great care to ensure that stimuli are matched on all lexical features that could influence response latencies, such as word length and word frequency. In line with these recommendations, to design the fire Stroop task for the current study, the Edinburgh Associative Thesaurus (<http://www.eat.rl.ac.uk/>) was first used to generate associations with the word “fire”, which produced a total of 49 associations. From these 49, 24 were selected as relating directly to fire, by excluding words considered to relate to fire only when used as a compound noun (e.g. “truck”, or “engine”). A group of 24 neutral control words was generated using the Kilgariff norms for written word frequency of the British National Corpus (<http://www.kilgariff.co.uk/bnc-readme.html>). Care was taken that control words did not conjure up imagery related to particular colours. Both sets of words were then combined, alphabetized and presented to 100 participants of a brief online survey, who were asked to categorize all words as either ‘fire-related’ or ‘not related to fire’. Words which produced less than 90% agreement between individuals were removed. This resulted in a final set of 21 fire-related words and 21 neutral words, matched for word length, word type, and frequency. These stimuli are shown in Table 1 below.

**Table 1: Fire and neutral word stimuli for fire Stroop task**

Fire words	Neutral words
ash	ads
blast	sleep
blaze	knots
bright	narrow
burn	miss
candle	parade
coal	desk
fire	size
flame	train
flare	booth
fuel	ship
glow	drum
heat	note
hot	top
light	piece
lighter	pyjamas
matches	tourist
petrol	return
smoke	sauce
spark	blend
warmth	lesson

The fire Stroop task was programmed for presentation to participants in 2 practice blocks and 3 task blocks, using the colours white, green, blue and purple, in Arial font, size 80pt, on a 13-inch Apple MacBook®. Practice blocks consisted of 16 neutral words only, while each task block contained 21 fire words and 21 neutral words, in pseudo-randomized order (avoiding colour repetition). Participants were instructed to use a keyboard to press the button that matches the colour of the presented word, as quickly

and accurately as possible. Each stimulus was preceded by a fixation cross (displayed for 1000ms), followed by an inter-stimulus interval (ISI) of 500ms. Fire or neutral words were then presented for a maximum of 3000ms, or until a response was made, and this was followed by a further ISI of 100ms, before presentation of the next fixation cross. Maximum duration of this task was therefore 3.22 minutes per task block, or 9.66 minutes for all 3 blocks, and was considerably shorter if participants made faster responses. Figure 2 shows the task schematic for the fire Stroop task.



**Figure 2: Fire Stroop task schematic**

## **2.6 Testing procedure**

Full written informed consent was obtained from all participants, and in addition, parental consent was obtained from those participants below the age of 16. Information sheets and consent forms are shown in Appendix D. Participation was reimbursed with a £10 high street shopping voucher. Testing sessions lasted maximally 45-50 minutes, which included consent procedures. Participants completed the reading task and all questionnaire measures first, followed by the fire Stroop task.

### **3 Results**

#### **3.1 Participant characteristics**

##### *3.1.1 Demographics and reading ability*

Participants did not differ on age. A chi-square comparison showed that although fire setters and school controls were reasonably well matched for gender ( $p = .05$ ), the non-fire setting antisocial group included more female participants. Non-fire setting antisocial adolescents also showed lower WIAT Reading standard scores than fire setters and school controls, although mean standard scores remained within one standard deviation of the mean. On WIAT-derived Reading Age, non-fire setting antisocial participants differed only from school controls, showing lower significantly lower scores. Overall, both performance on the WIAT Reading task and participants' ability to complete questionnaires without reported or observed difficulties, suggested that minimum reading ability required to perform the Stroop task (i.e. single word reading) was sufficient among all participants.

Table 2 below summarises participant demographics and reading levels for each group, and outcomes of statistical comparisons for these characteristics.

**Table 2: Participant demographics and reading levels**

	<b>Fire setting group</b>	<b>Non-fire setting antisocial group</b>	<b>School control group</b>	<b>Test statistic and p-value</b>
<b>Mean age (SD) (Range)</b>	14.24 (1.39) (12-17)	14.53 (.92) (13-16)	14.05 (1.81) (12-18)	F (2, 59) = .49 p = .614
<b>N (M, F)</b>	25 (23m, 2f)	15 (9m, 6f)	22 (21m, 1f)	$\chi^2 = 10.47$ , <b>p = 0.05</b>
<b>Mean WIAT-II reading subtest standard score (SD) (Range)<sup>1</sup></b>	96.83 (12.94) (68-113)	85.57 (16.13) (62-116)	101.05 (9.58) (81-114)	F (2, 59) = 6.49, <b>p = .003</b>
<b>Mean WIAT-II reading subtest Reading age (SD) (Range)<sup>1</sup></b>	13.37 (2.67) (9.04-16.00)	12.16 (2.92) (8.04-16.00)	14.42 (2.00) (10.08-16.00)	F (2, 59) = 3.50, <b>p = .037</b>

<sup>1</sup> Note: 2 participants in the fire setting group and one participant in the non-fire setting antisocial group did not complete the WIAT, therefore N=59 for this analysis.

### *3.1.2 Fire setting behaviours, fire play and age of onset*

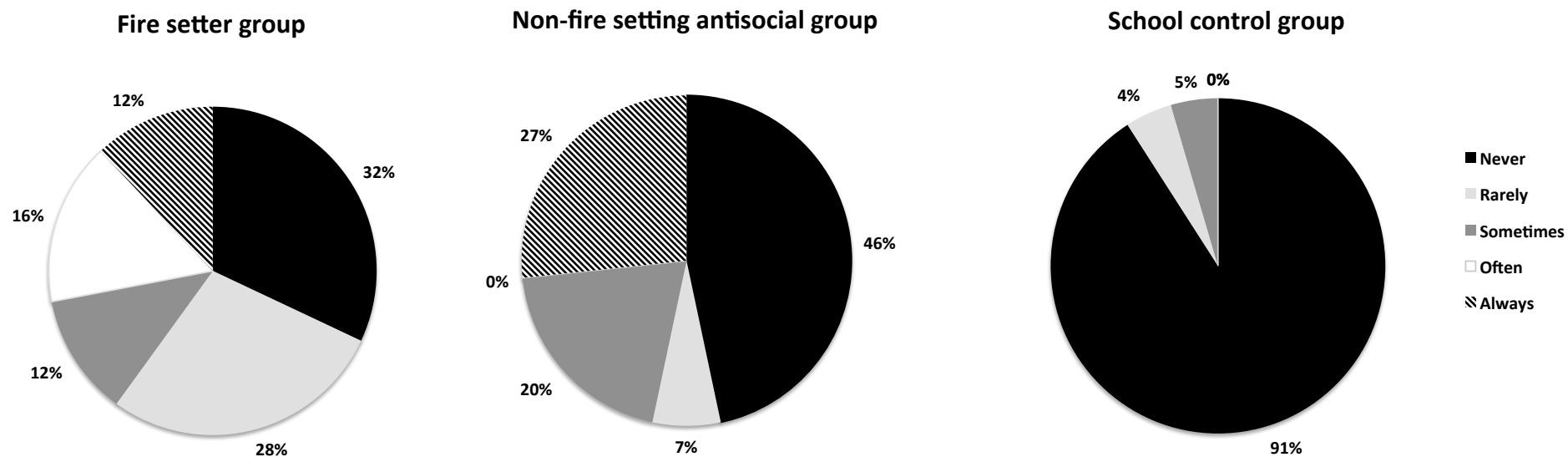
Among fire setters, unsanctioned fire setting during the past 12 months ranged from 1 to 50, with a median of 3 and mode values of 1 and 2.

All participants indicated how often they had carried lighters or matches with them over the past 12 months, as well as age of onset of lighter/match play and age of onset of fire setting (see FIQ in Appendix C). Group differences were examined using Kruskal-Wallis tests and follow-up planned Mann-Whitney comparisons, examining differences between fire setters and both comparison groups. Groups differed significantly on

lighter/match carrying frequency, onset of lighter/match play and onset of fire setting [lighter/match carrying:  $\chi^2 (2) = 16.10$ ,  $p < .01$ ; onset of lighter/match play:  $\chi^2 (2) = 8.81$ ,  $p < .05$ ; onset of fire setting:  $\chi^2 (2) = 22.01$ ,  $p < .01$ ].

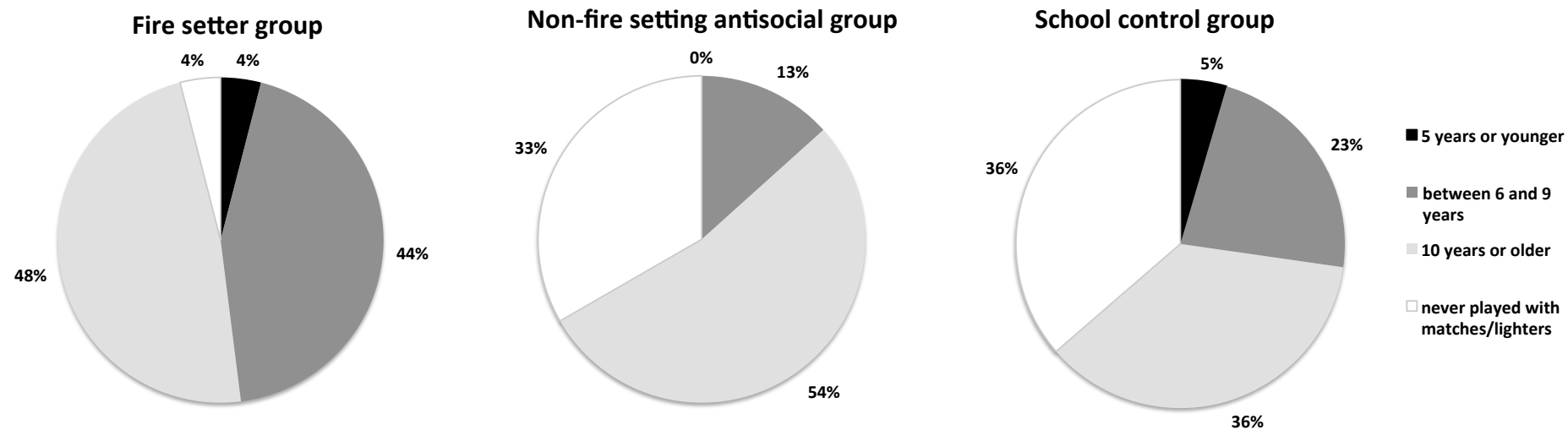
Mann-Whitney comparisons showed that fire setters were significantly more likely than school controls ( $U = 108.00$ ,  $p < .01$ ), but not more than non-fire setting antisocial participants, to carry lighters/matches during the previous year ( $U = 183.00$ ,  $p > .05$ ). Thus, both fire setting and non-fire setting antisocial adolescents carried matches/lighters more frequently than school controls. These frequencies are shown in Figure 3 below.





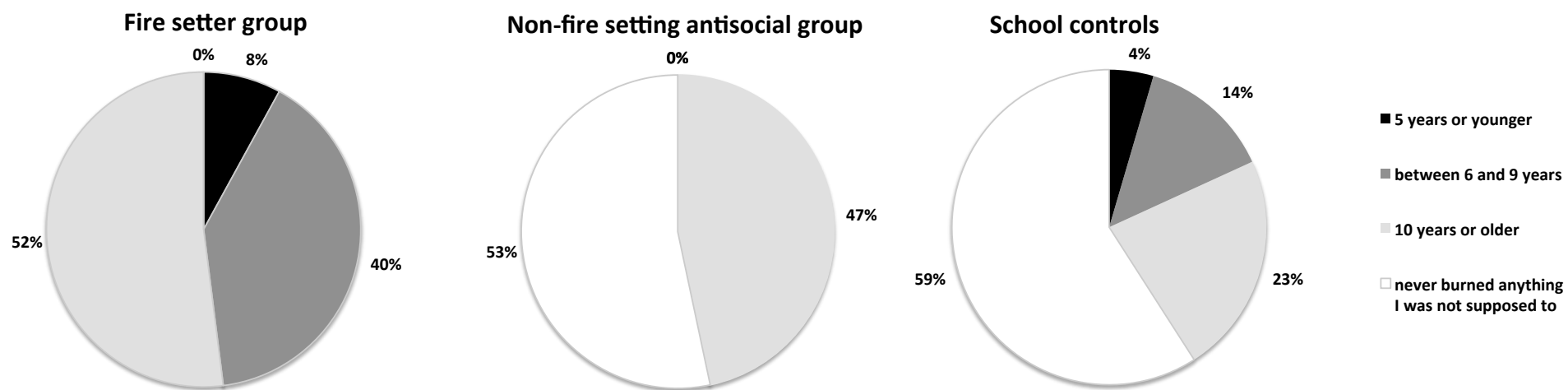
**Figure 3: Frequency of match/lighter carrying during the past year across groups**

Fire setters were significantly younger than school controls and non-fire setting antisocial participants at age of first play with lighters/matches (fire setters vs school controls:  $U = 177.00$ ,  $p < .05$ ; fire setters vs non-fire setting antisocial adolescents:  $U = 95.50$ ,  $p < .01$ ). Onset of match/lighter play is shown in Figure 4 below.



**Figure 4: Onset of match/lighter play across groups**

Lastly, fire setters showed significantly earlier onset of unsanctioned fire setting than school controls and non-fire setting antisocial participants (fire setters vs school controls:  $U = 110.50$ ,  $p < .01$ ; fire setters vs non-fire setting antisocial adolescents:  $U = 45.50$ ,  $p < .01$ ). Fire setters most frequently endorsed “10 years or older” and “between 6 and 9 years” for age of onset of match/lighter play and unsanctioned fire setting, as Figure 5 below illustrates.

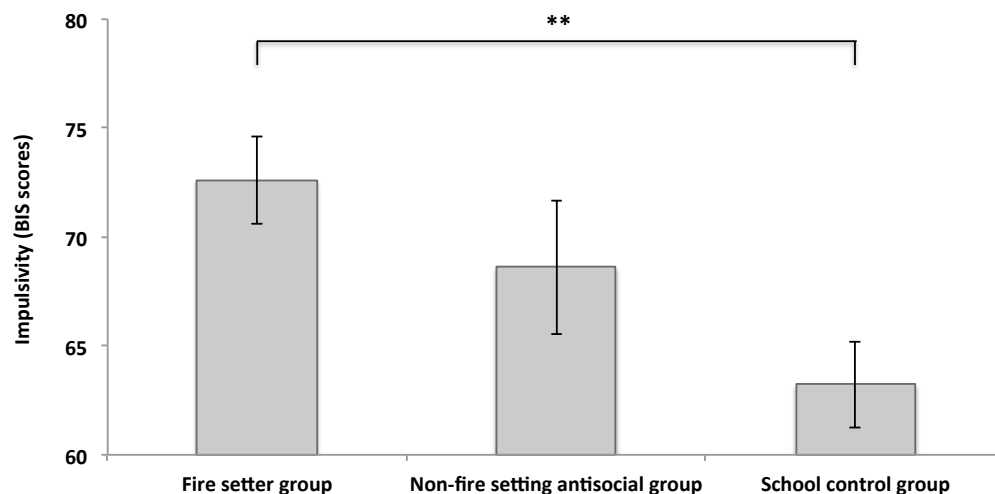


**Figure 5: Onset of fire setting across groups**

### 3.1.3 Impulsivity, empathy and callous-unemotional traits

Data were first inspected visually and then tested for normality. Results of the Kolmogorov-Smirnoff and Shapiro-Wilk tests for impulsivity, empathy and callous-unemotional traits indicated that data did not deviate significantly from the norm (all  $p > .05$ ). Group differences were therefore examined using one-way ANOVAs.

Groups differed significantly on impulsivity scores [ $F(2, 59) = 4.92, p < .05, \eta_p^2 = .14$ , representing a large effect]. Bonferroni comparisons showed that fire setters showed significantly higher impulsivity than school controls ( $p < .01$ ), as illustrated in Figure 6 below.



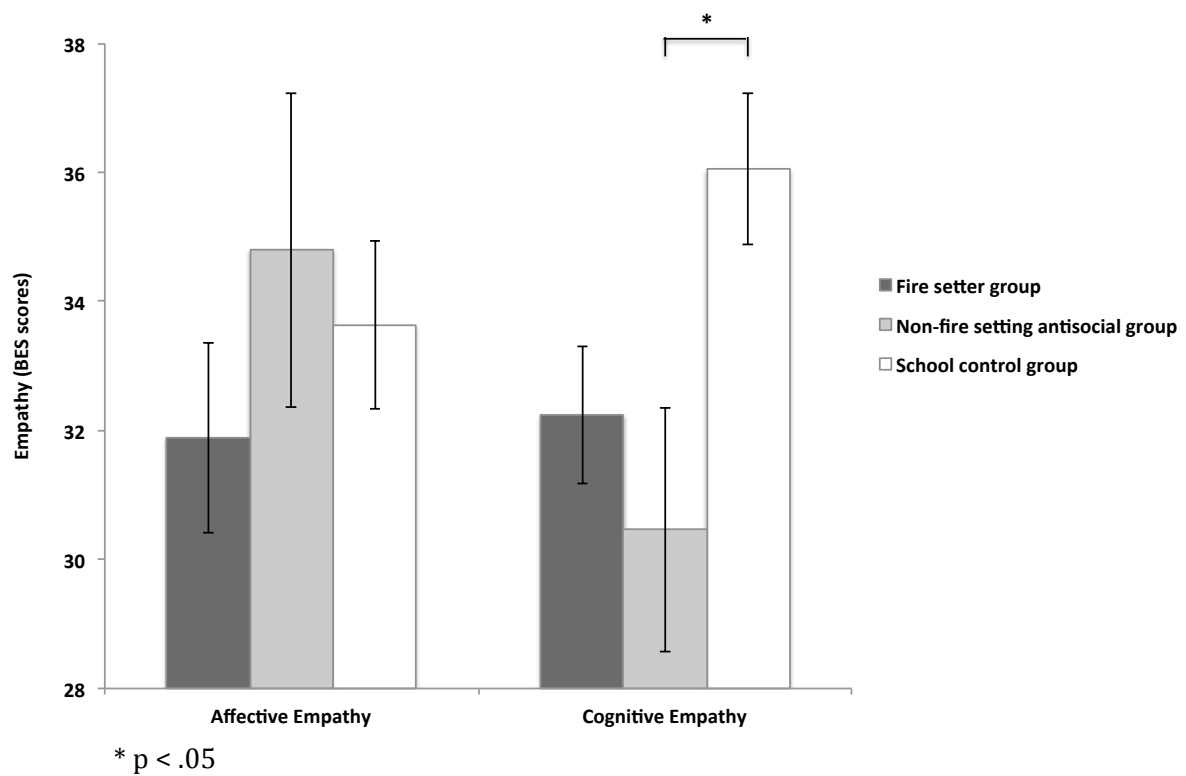
\*\*  $p < 0.01$

Error bars represent the standard error of the mean.

**Figure 6: Mean impulsivity scores across groups.**

Scores of affective empathy did not differ statistically between groups [ $F(2, 59) = .765, p > .05$ ]. Inspection of group means showed that fire setters showed lower affective empathy than non-fire setting antisocial participants and school controls. Surprisingly, the non-fire setting antisocial group showed highest affective empathy scores, however these effects were not statistically significant.

A group effect did emerge for cognitive empathy [ $F(2, 59) = 4.47, p < .05, \eta_p^2 = .13$ , representing a medium effect]. Bonferroni comparisons showed that school controls had significantly higher cognitive empathy than non-fire setting antisocial adolescents ( $p < .05$ ). A similar pattern emerged for fire setters and school controls, where the difference in scores approached significance ( $p = .095$ ). Mean scores are shown in Figure 7 below.

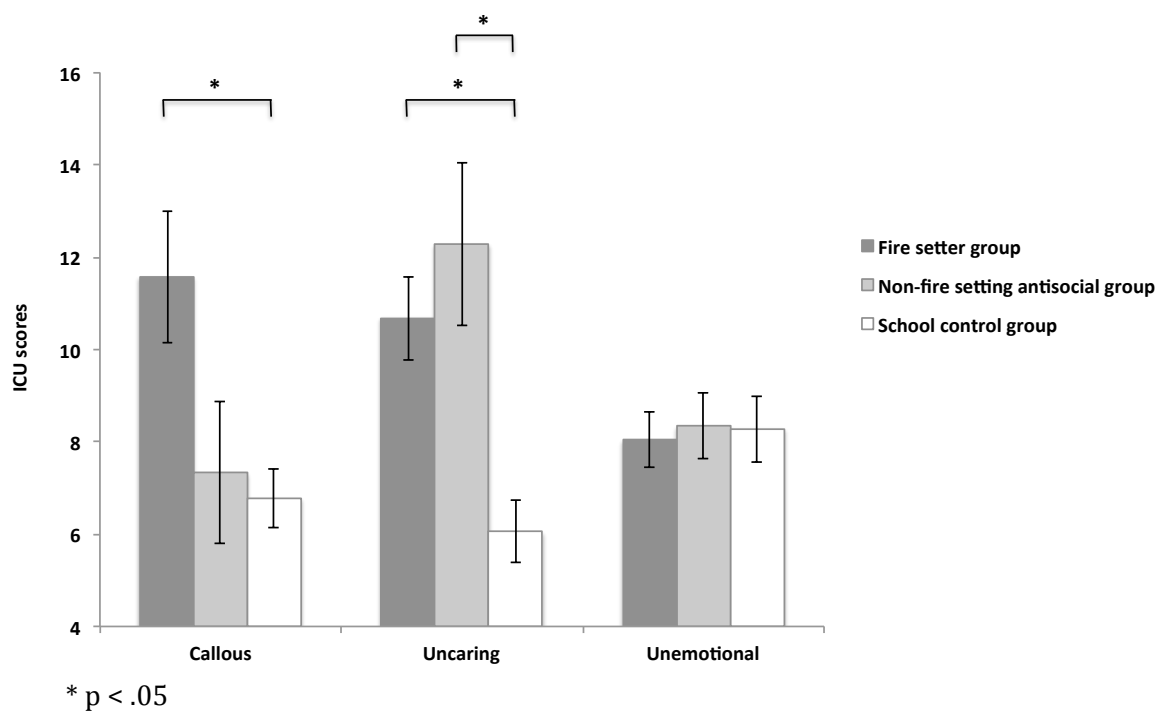


Error bars represent the standard error of the mean.

**Figure 7: Empathy scores across groups**



Lastly, groups were compared for differences in callous, uncaring and unemotional traits. An effect for group emerged on the callous subscale [ $F(2, 59) = 5.13, p < .01, \eta_p^2 = .15$ , representing a large effect], with Bonferroni comparisons revealing that fire setters had significantly higher scores than school controls ( $p < .05$ ). The difference between non-fire setting antisocial adolescents and fire setters approached significance ( $p = .068$ ). Groups also differed on the uncaring subscale [ $F(2, 59) = 8.94, p < .01, \eta_p^2 = .23$ , representing a large effect]. Bonferroni comparisons indicated that both fire setters and non-fire setting antisocial adolescents showed significantly higher scores than controls (both  $p < .05$ ). On the unemotional subscale, groups showed no differences [ $F(2, 59) = .05, p > .05$ ]. Figure 8 shows mean scores on callous, uncaring and unemotional subscales across groups.



Error bars represent the standard error of the mean.

**Figure 8: Callous-unemotional traits across groups**

### 3.2 Hypothesis 1: Do groups differ on self-reported fire interest ?

Visual inspection of fire interest scores suggested that data were not normally distributed, which was confirmed by the results of the Kolmogorov-Smirnoff and Shapiro-Wilk tests, both of which indicated that data deviated significantly from the normal distribution (both  $p < .05$ ). Group differences were therefore examined using nonparametric tests, based on the rationale outlined by Field (2009) that applying a more appropriate statistical test is preferable over data transformation except where no appropriate non-parametric test is available. A Kruskal-Wallis chi-square test showed that groups did not differ significantly on fire interest [ $\chi^2 (2) = 0.99, p > .05$ ]. Mean values, standard deviations and ranges for each group are shown in Table 3 below, which illustrate that fire setters showed highest fire interest overall, but also high variability existed among non-fire setting antisocial participants.

**Table 3: Fire interest scores across groups**

	Fire setting group	Non-fire setting antisocial group	School control group
Fire interest score (SD) (Range)	11.20 (8.89) (0-31)	9.80 (11.14) (0-34)	8.77 (5.40) (0-19)

### **3.3 Hypothesis 2: Do groups differ on attentional bias towards fire-related words ?**

#### *3.3.1 Fire Stroop data reduction and practice block performance*

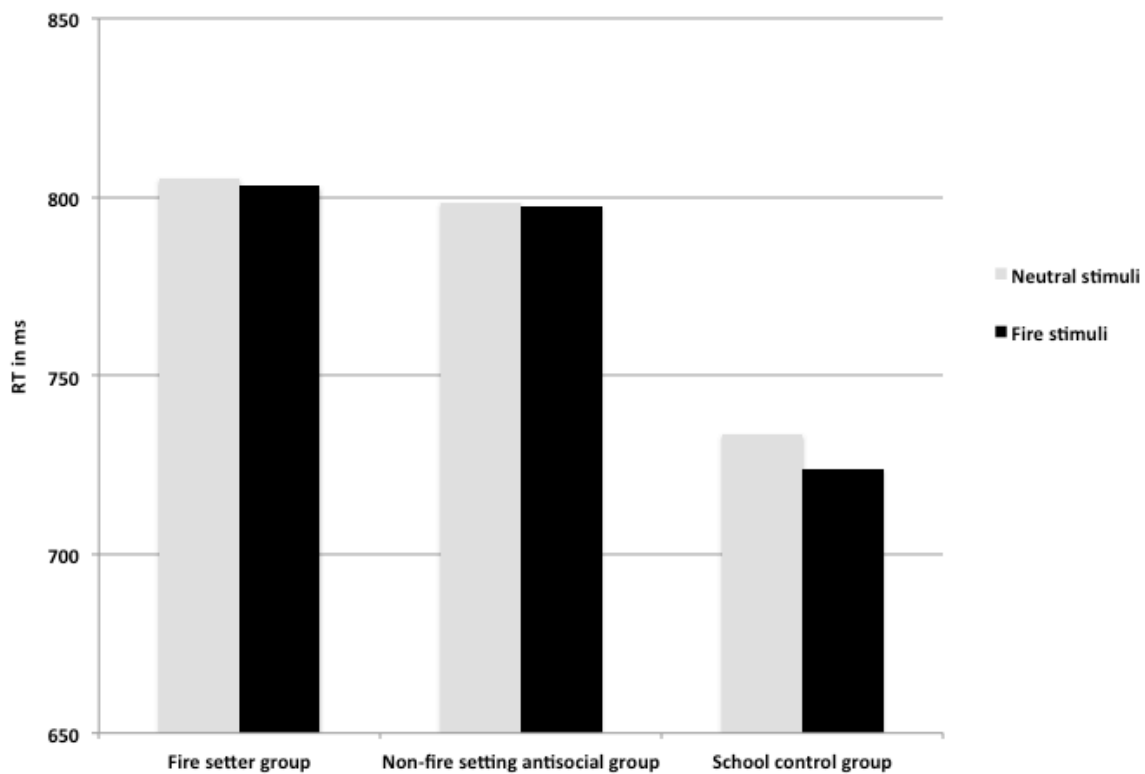
One participant in the non-fire setting antisocial group was excluded from these analyses, since his Stroop data were not recorded (therefore all  $N=61$ ). Fire Stroop trials were only included in the analysis if they were presented in a different colour from the previous trial, thus avoiding artificial decreases in reaction time (RT) produced by repeated colours (i.e. participants not having to choose a different colour button). This left a total of 95 stimuli (41 fire words, 54 neutral words) included in the final analysis.

Groups were compared for accuracy on practice blocks, which contained no fire stimuli, to ensure comparable understanding of the task among all participants. Data deviated from normality ( $p < .05$ ), therefore non-parametric analyses were performed. Groups showed comparable accuracy rates on practice blocks [ $\chi^2 (2) = 2.42, (p > .05)$ ].

#### *3.3.2 Fire Stroop reaction times*

Visual inspection and normality tests indicated that reaction time data deviated significantly from normality ( $p < .05$ ), with positive skew. In this case, as the only appropriate analysis was a 3 x 2 ANOVA, data were transformed using a square root transformation, in line with Field's (2009) recommendation for positively skewed data. Transformed mean RTs were entered into a 3 x 2 (group x stimulus type) mixed ANOVA, which showed that a main effect of group approached significance [ $F(2, 58) = 2.556, p = .086$ ]. No main effect of stimulus type emerged [ $F(1, 58) = .819, p > .05$ ], nor was the

interaction significant [ $F(2, 58) = .290, p > .05$ ]. Mean RTs for fire and neutral stimuli across groups are shown in Figure 9 below (non-transformed), which illustrates that school controls showed slightly faster RTs than both other groups.



**Figure 9: Stroop RTs for fire and neutral stimuli across all groups**

### *3.3.3 Fire Stroop accuracy*

Accuracy scores deviated significantly from normality ( $p < .01$ ) with negative skew, therefore data were transformed using a square transformation, following Field's (2009) recommendation for negatively skewed data, in order to allow analysis using a 3

x 2 ANOVA. Transformed accuracy values were then entered into a 3 x 2 (group x stimulus type) mixed ANOVA, which showed neither a significant main effect of group [ $F(2, 58) = 1.152, p > .05$ ], nor a main effect of stimulus type [ $F(1, 58) = 2.307, p > .05$ ]. No significant interaction emerged [ $F(2, 58) = .400, p > .05$ ]. Non-transformed mean accuracy rates are shown in Table 4 below, highlighting that all three groups showed similar rates of accuracy for neutral and fire words.

**Table 4: Accuracy on the fire Stroop task across groups**

	<b>Fire setting group</b>	<b>Non-fire setting antisocial group</b>	<b>School control group</b>
<b>% accuracy neutral words (SD) (Range)</b>	96.55 (3.7) (86.27-100.00)	98.03 (2.3) (94.12-100.00)	95.88 (4.84) (78.00-100.0)
<b>% accuracy fire words (SD) (Range)</b>	96.35 (3.5) (86.36-100.00)	96.73 (3.3) (90.91-100.00)	95.12 (5.4) (79.07-100.00)

### **3.4 Hypothesis 3: Does fire interest show a relationship with attentional bias towards fire stimuli ?**

To account for a number of variables deviating considerably from normality, correlational analyses were also carried out as non-parametric tests. Spearman's rho correlations were performed to examine relationships between selected variables only, to reduce the likelihood of type I errors. In order to examine aspects of the Stroop effect, difference scores between RTs for neutral stimuli and fire stimuli were calculated

(*neutral minus fire*). Thus, fire interest, fire setting frequency, age of onset of fire play and fire setting, frequency of lighter/match carrying, Stroop effect RTs and accuracy on fire stimuli were entered into a correlation matrix, across all participants.

Fire interest was significantly associated with decreased accuracy for fire stimuli ( $r_s = -.343$ ,  $n = 61$ ,  $p < .01$ ;  $r^2 = 0.11$  representing a medium effect). Increased fire interest was also associated with fire setting onset at younger age ( $r_s = -.266$ ,  $n = 62$ ,  $p < .05$ ;  $r^2 = 0.08$  representing a small effect), however this effect was not robust enough to remain significant following Bonferroni corrections for multiple comparisons. An association between increased fire interest and younger onset of match/lighter play approached significance ( $r_s = -.214$ ,  $n = 62$ ,  $p = .095$ ).

With regard to fire setting characteristics, a number of significant associations emerged. As would be expected, frequency of fire setting was significantly associated with frequency of carrying lighters/matches ( $r_s = .411$ ,  $n = 62$ ,  $p < .01$ ;  $r^2 = 0.17$  representing a medium effect). Fire setting frequency was also associated with age of onset of fire play ( $r_s = -.373$ ,  $n = 62$ ,  $p < .01$ ;  $r^2 = 0.13$  representing a medium effect) and onset of fire setting ( $r_s = -.611$ ,  $n = 62$ ,  $p < .01$ ;  $r^2 = 0.37$  representing a large effect), such that those with frequent fire setting were more likely to show earlier onset of fire play and fire setting.

Frequency of lighter/match carrying was also associated with earlier onset of lighter/match play ( $r_s = -.254$ ,  $n = 62$ ,  $p < .05$ ;  $r^2 = 0.06$  representing a small effect), and similarly, high frequency of match/lighter carrying was associated earlier onset of fire setting ( $r_s = -.282$ ,  $n = 62$ ,  $p < .05$ ,  $r^2 = .07$  representing a small effect). Clearly caution is

warranted when interpreting these two correlations, as the effects are not robust enough to withstand Bonferroni corrections for multiple comparisons.

Lastly, as would be expected, onset of lighter/match play and onset of fire setting correlated strongly and significantly with one another ( $r_s = .671$ ,  $n = 62$ ,  $p < 0.01$ ;  $r^2 = 0.45$  representing a large effect).

The correlation matrix is shown in Table 5 below.

**Table 5: Correlation matrix for relationships between fire setting characteristics, fire interest and fire Stroop performance**

	Fire interest	Fire setting frequency	Frequency of lighter/match carrying	Onset of lighter/match play	Onset of fire setting	Stroop RT difference (fire minus control) <sup>a</sup>	Stroop % accuracy on fire words <sup>a</sup>
Fire interest	---						
Fire setting frequency	$r_s = .128$ $p = .323$	---					
Frequency of lighter/match carrying	$r_s = .160$ $p = .215$	<b><math>r_s = .411</math> <math>p = .001</math></b>	---				
Onset of lighter/match play	$r_s = -.214$ $p = .095$	<b><math>r_s = -.373</math> <math>p = .003</math></b>	<b><math>r_s = -.254</math> <math>p = .047</math></b>	---			
Onset of fire setting	<b><math>r_s = -.266</math> <math>p = .037</math></b>	<b><math>r_s = -.611</math> <math>p = .000</math></b>	<b><math>r_s = -.282</math> <math>p = .027</math></b>	<b><math>r_s = .671</math> <math>p = .000</math></b>	---		
Stroop RT difference (fire minus control) <sup>a</sup>	$r_s = -.141$ $p = .280$	$r_s = .041$ $p = .752$	$r_s = .068$ $p = .602$	$r_s = -.109$ $p = .405$	$r_s = -.078$ $p = .551$	---	
Stroop % accuracy on fire words <sup>a</sup>	<b><math>r_s = -.343</math> <math>p = .007</math></b>	$r_s = .059$ $p = .649$	$r_s = -.110$ $p = .398$	$r_s = .188$ $p = .146$	$r_s = .022$ $p = .866$	$r_s = .112$ $p = .389$	---

<sup>a</sup>  $n = 61$ , as 1 participant did not complete the Stroop task



### 3.5 Hypothesis 4: What predicts frequency of fire setting ?

Only the fire setter group was included in this analysis (n=26). The number of predictor variables was therefore limited to two, as a minimum of 10 participants is required for each predictor. Fire setting frequency was first examined for normality, and found to be positively skewed, with normality tests confirming deviation from normality ( $p < .01$ ). In order to allow performance of a regression analysis, fire setting frequency data were initially transformed using a square root transformation, however this did not remove the positive skew sufficiently. A logarithmic transformation was therefore applied, after which data no longer deviated significantly from the normal distribution. Transformed frequency values were entered as the dependent variable into a backward selection step-wise linear regression model, in order to examine the role of all predictors first, followed by step-wise removal, leaving only those contributing most significantly. Predictor variables were chosen based on those clinically-relevant characteristics identified in Section 3.1.3 for which fire setters differed significantly from controls, but non-fire setting antisocial participants did not, in order to isolate factors potentially relevant to fire setting but not antisocial behaviours more generally. Thus, impulsivity scores and callousness scores were entered into the regression model as predictors.

Initial inspection of the correlation matrix for all variables suggested no evidence of multicollinearity. Casewise diagnostics indicated no presence of outliers. Callousness was removed in the second model, leaving only impulsivity as a significant in the final model, which was a significant fit of the data [ $F(1, 23) = 6.52, p < .05$ ; step 1:  $R^2 = .223$ , step 2:  $R^2 = .221$ , adjusted  $R^2 = .187$ ]. Coefficients of the regression model are shown in Table 6 below, showing that only the coefficient for impulsivity differed significantly

from zero [ $t(22) = 2.55$ ,  $p < .05$ ], and positively predicted fire setting frequency, with additional predictors not improving the fit of the model. Variance accounted for by this model is 18.7%.

**Table 6: Regression coefficients for predictors of fire setting frequency**

Model	Unstandardized coefficients		Standardized Coefficient	t	p-value
	B	Std error	Beta		
<b>1</b>	<b>(Constant)</b>	-2.22	1.41	-1.57	.130
	<b>Impulsivity score</b>	.045	.021	.448	.041
	<b>Callousness score</b>	.008	.030	.053	.800
<b>2</b>	<b>(Constant)</b>	-2.29	1.36	-1.69	.105
	<b>Impulsivity score</b>	.047	.019	.470	.018

## 4 Discussion

### 4.1 Summary of results

The current study aimed to identify clinically-relevant correlates of adolescent fire setting, by examining fire interest, attentional bias towards fire-related stimuli, impulsivity, empathy and callous-unemotional traits among fire setters, age-matched adolescents marked by antisocial behaviours but *not* current fire setting, and age-matched school controls. The inclusion of two control groups was deemed important, since many previous studies have failed to identify variables *specific* to adolescent fire setting, rather than antisocial behaviours *generally*, due to a frequent lack of adequate control conditions. To assess attentional bias, a novel, modified lexical Stroop task was used, which presented participants with fire-related and neutral words, with the instruction to match colours as quickly and accurately as possible.

#### *4.1.1 Fire setting behaviours and associated characteristics of the current sample*

Data from the TAPP-C Fire Interest Questionnaire showed that participants in the fire setter group most frequently endorsed 1-2 instances of unsanctioned fire setting during the previous 12 months. As could be expected, across all participants, those who frequently carried matches/lighters were more likely to engage in more frequent fire setting. Frequent fire setting was also associated with an earlier onset of fire play and unsanctioned fire setting, with the strongest effect emerging for fire setting. Although caution is warranted with regard to the robustness of some of these effects to withstand

Bonferroni corrections for multiple correlations, these associations support the use of the FIQ as a valid measure of fire setting behaviours and associated characteristics in this study.

Both fire setting and non-fire setting adolescents showed more frequent match/lighter carrying over the previous 12 months compared to school controls, therefore this does not appear to differentiate fire setters from non-fire setting antisocial participants. Indeed, many participants acknowledged that match and lighter carrying was more likely to be associated with smoking than fire play or unsanctioned fire setting.

Onset of fire play and also onset of unsanctioned fire setting, however, occurred at significantly younger among fire setters than non-fire setting antisocial adolescents and school controls. Importantly, as Figure 5 shows, a number of non-fire setting antisocial and school control participants acknowledged having previously engaged in fire play and unsanctioned fire setting, however they had not done so with later onset and discontinued unsanctioned fire setting at the time of testing. This suggests that earlier onset of fire play and fire setting may be a marker of risk for continued, frequent fire setting among this age group.

Additional group differences emerged when comparing scores of impulsivity, empathy and callous-unemotional traits. Fire setters, but not non-fire setting antisocial participants, showed significantly higher impulsivity than school controls. Groups showed comparable levels of affective empathy, whilst cognitive empathy was highest among school controls, compared to both other groups. Thus, empathy deficits alone did not differentiate fire setters from other groups. Lastly, for scores of callous-unemotional

traits, groups showed comparable scores of unemotionality. Both fire setting and non-fire setting antisocial adolescents showed higher scores on the uncaring subscale than school controls. Interestingly, fire setters showed significantly higher scores of callousness than controls, with large effect size indicated. Thus, it appears that both fire setting and non-fire setting antisocial participants were characterised by uncaring traits and low cognitive empathy. Fire setting adolescents were additionally characterised by significantly elevated scores of impulsivity and a high degree of callous traits. These additional characteristics were examined further as risk factors for frequent fire setting, in Hypothesis 4 below.

#### *4.1.2 Hypothesis 1*

Hypothesis 1, that fire setting adolescents will differ from non-fire setting adolescents on self-reported fire interest, was not supported. Both fire setting and non-fire setting antisocial adolescents showed higher mean fire interest scores than controls, with fire setters showing highest scores, however group differences were not statistically significant.

#### *4.1.3 Hypothesis 2*

Hypothesis 2, that fire setting adolescents will show an attentional bias towards fire-related words on the modified fire Stroop task, was examined in relation to reaction time differences between fire and neutral stimuli, and also differences in accuracy to fire and neutral stimuli. Inspection of mean values and statistical comparisons showed that no group showed a strong Stroop effect, however, therefore hypothesis 2 was also not

supported. Mean RTs and accuracy values showed that participants performed similarly on fire and neutral stimuli. This is illustrated in Figure 9, showing mean RTs, and Table 4, showing accuracy rates.

#### *4.1.4 Hypothesis 3*

Hypothesis 3 stated that attentional bias towards fire-related words would show a positive correlation with fire interest and frequency of fire setting, across all participants. This was examined using correlational analyses, which showed that higher fire interest was associated with decreased accuracy on fire items on the Stroop. This suggests that those with high fire interest made more errors on fire Stroop trials. Interestingly, this was not reflected in RTs, in that no relationship emerged between fire interest and increased RTs for fire trials. Hypothesis 3 was therefore partially supported, with regard to the association between attentional bias and fire interest. In terms of frequency of fire setting, no significant association with attentional bias (RT difference or accuracy) emerged. Thus, in the general population, it is plausible that higher fire interest may co-occur with bias towards fire material, even in the absence of fire setting behaviour.

#### *4.1.5 Hypothesis 4*

Hypothesis 4 related to the prediction of fire setting frequency through a combination of the characteristics measured in the present study. The number of predictor variables was limited by the amount of participants who currently engaged in unsanctioned fire setting (n=26), therefore two variables – impulsivity and callousness, based on

previously identified group differences - were chosen to be entered into a step-wise regression model. The resultant model was a significant fit of the data, and showed that in the current sample fire setting frequency was best predicted by increased impulsivity, with 18.7% of variance accounted for by this model. Hypothesis 4 was therefore supported, although analyses were somewhat limited due to low participant numbers.

## **4.2 Findings of the current study in the context of previous findings**

### *4.2.1 Onset of match/lighter play and fire setting*

Results of the current study suggest that mere availability of or access to matches or lighters, as indicated by participants frequently carrying matches or lighters with them, did not differentiate fire setters from non-fire setting antisocial participants. Those who were engaged in fire setting *did* however show an earlier onset of match/lighter play and unsanctioned fire setting, a finding which was also reported by McCardle, Lambie, & Barker-Collo (2004).

### *4.2.2 Fire interest and fire setting frequency*

The current study found no differences between groups on fire interest, nor did fire interest correlate with fire setting frequency. Group equivalence for fire interest was also reported by (Gallagher-Duffy *et al.*, 2009), who also used the self-reported TAPP-C Fire Interest Questionnaire. These results do however stand in contrast with studies which have emphasized strong links between fire interest and fire setting frequency, such as Del Bove, (2005), Kolko & Kazdin (1991b, 1992, 1994), and those linking fire

interest to fire setting recidivism (Kolko *et al.*, 2006; MacKay *et al.*, 2006; Rice & Harris, 1991b). One important difference between the current study and previous studies is that fire interest was assessed in self-report format, rather than using parental or clinician-ratings. As Gallagher-Duffy and colleagues (2009) have pointed out, self-report measures may be subject to many biases, and particularly among adolescent populations marked by antisocial or conduct problems, who may not be motivated to complete questionnaires with diligence. Although participants in the current study completed the FIQ at the start of their session, were encouraged to respond honestly, and were reassured that results would not affect their clinical treatment (in services) or aspects of education (in pupil referral units), they may still have been reluctant to disclose information related to high interest in fire. This may have been particularly problematic for this measure, for which participants frequently commented that they found it to be an unusual questionnaire, compared to the other measures administered in this study. Alternatively, assuming that participants *did* provide reliable self-reports of their level of fire interest, it may be that at the sample recruited for the current study included few participants with a high degree of fire interest. This will be discussed in more detail in Section 4.4.2 below.

Lastly, it must be considered that the current results plausibly question the validity of the TAPP-C Fire Interest Questionnaire. The measure was developed in a Canadian context and has never been used in the UK, therefore future studies may consider using this measure with caution, or in combination with additional indices of fire interest, such as those developed by Kolko and colleagues.



#### 4.2.3 Performance on the fire Stroop task

On the modified Stroop task, both RT slowing and decreased accuracy are considered evidence for ‘Stroop interference’, or an attentional bias towards fire stimuli, as information processing resources are devoted to processing the salient, fire-related stimulus contents, rather than performing the colour matching task. Across participants of the current study, no significant difference in either RTs or accuracy rates to neutral versus fire stimuli was found, which indicates that no Stroop interference effect emerged. That is, neither group showed slowed RTs to fire stimuli in comparison to neutral stimuli, nor did groups show higher accuracy for neutral stimuli than for fire stimuli. What emerged, however, was an association between high fire interest and decreased accuracy on fire words, suggesting that an interference effect may have existed for those participants with high fire interest. These results stand somewhat, although not completely, in contrast with those of Gallagher-Duffy *et al.* (2009), who used a pictorial version of the fire Stroop, and showed that fire setters showed slowed RTs for fire stimuli as well as decreased accuracy on pictorial fire items. Stroop interference, albeit only in the form of slowed RTs for fire items, also correlated positively with fire setting frequency. It is possible that the sample tested in Gallagher-Duffy’s study showed a higher degree of fire setting, particularly as participants were recruited from an ongoing, inpatient fire setter intervention programme. Unfortunately, Gallagher-Duffy and colleagues’ paper does not provide non-transformed mean values for Stroop variables or questionnaire scores, therefore it is not possible to compare participant characteristics across these two studies.

An alternative reason for the differences in Stroop results between the present study and that of Gallagher-Duffy and colleagues (2009) may be the use of lexical rather than

pictorial stimuli. It is likely that lexical stimuli make it more difficult to elicit Stroop effects using this paradigm, since pictorial stimuli may be more likely to elicit a more immediate association with fire, as there may be more salience in the information portrayed in fire-related images. Pictorial stimuli may resemble fire-related material more closely than fire words, and may indeed allow those with strongly activated schemas to show stronger attentional bias towards fire stimuli. However, in the broader context of the use of the modified Stroop task with offender groups, it is noteworthy that three of the four previous studies have used word stimuli (Price & Hanson, 2007; Smith & Waterman, 2003, 2004), and only one used pictorial stimuli (Ó Ciardha & Gormley, 2012) to assess attentional bias among violent and sexual offenders. While lexical Stroop designs were able to elicit increased RTs for violent/sexual material, the pictorial Stroop was not, which suggests that lexical stimuli are able to elicit robust Stroop effects among offenders. What appears to influence the paradigm greatly is the choice of standardisation procedure of stimuli used in modified Stroop tasks, particularly when these are pictorial (Price *et al.*, 2011). Although the lexical stimuli in the current study were chosen carefully and rated for “relatedness to fire” by an independent group of 100 independent raters, these raters were an adult convenience sample, rather than a group of adolescents similar to the primary participants of the study. Thus, it may be that the words used in the current task were not greatly salient for the participants in our sample.

In summary, there are two plausible explanations of the findings of the current study, as contrasting with Gallagher-Duffy *et al.*'s previous fire Stroop study: it may be that lexical stimuli were not sufficiently salient to allow attentional resources to be directed towards fire words. Importantly, however, Gallagher-Duffy *et al.*'s pictorial Stroop

paradigm did not show a positive relationship between Stroop interference and higher fire interest, which suggests that the pictorial Stroop may not be better equipped to elicit interference. Thus, it appears more likely that differences in sample characteristics account for the differences in findings: The current study included participants with relatively low fire interest, and instead relatively high impulsivity, therefore reaction times did not lengthen for fire words. High degrees of impulsivity may have led participants to respond in a more disinhibited manner on the Stroop paradigm, leading to fast reaction times and potentially more errors.

#### *4.2.4 Group differences on impulsivity, empathy and callous-unemotional traits*

Fire setters were found to be characterised by marked self-rated impulsivity in the current study. This is in line with previous studies which have emphasized the importance of traits of impulsiveness, although no study to date has provided self-rated, valid scale measurement of impulsivity among fire setters. Instead, impulsivity is often subsumed under measures of antisocial behaviours and behaviours thought to reflect poor underlying impulse control, such as risk taking, alcohol and substance misuse, hyperactivity and thrill-seeking (Dadds & Fraser, 2006; Del Bove *et al.*, 2008; MacKay *et al.*, 2009; Martin *et al.*, 2004). Where impulsivity *has* been directly assessed, as for example in McCarty and McMahon (2005), other-rated scales are often used and combined into composite scores, which has shown heightened ratings of impulsivity for persistent fire setters (Kolko & Kazdin, 1991a; McCarty & McMahon, 2005). The current findings contrast somewhat with those of Kolko and Kazdin (1992), who showed that impulsivity – as indicated by poor performance on the Matching Familiar Figures Task –

showed no association with fire setting. Contrary to Kolko and Kazdin's (1992) study however, the present study did not assess impulsivity in relation to a behavioural task. Instead, the present study is the first to show significantly increased self-rated impulsivity in fire setters but not age-matched antisocial adolescents or school controls, and that this impulsivity may be used to predict fire setting frequency among adolescents.

This study is also the first to examine affective and cognitive aspects of empathy separately among fire setters. Interestingly, affective empathy did not differ significantly between groups. The finding that affective empathy was highest in terms of mean values for non-fire setting antisocial participants is interesting, and may perhaps be accounted for by the larger proportion of female participants in this group. In Joliffe & Farrington's (2006) study describing the development of the Basic Empathy Scale, as well as these authors' 2007 validation study on an offending sample (Joliffe & Farrington, 2007), female participants scored higher on both affective and cognitive empathy, however the magnitude of this gender difference was higher for affective empathy, which supports the notion that inclusion of more female participants in the non-fire setting antisocial group may account for the observed, though non-statistically significant group differences.

In contrast, cognitive empathy was low for both fire setting and non-fire setting antisocial adolescents. Low levels of empathy have previously been described as a distinguishing feature of severe versus non-severe inpatient juvenile arsonists (Sakheim & Osborn, 1999), however empathy measures were not collected from participants, but rather estimated from psychiatric report. The results of the current study are in line

with those of Walsh *et al.* (2004), who have provided the only previous study to date that directly examined adolescents' self-rated empathy. Given that the measure of empathy used by Walsh and colleagues is likely to capture affective empathy more so than cognitive empathy (Jolliffe & Farrington, 2006), the current study corroborates this finding, and furthermore indicates that cognitive empathy may be low among both fire setting and also non-fire setting antisocial adolescents. Thus, it appears that empathy deficits alone may not confer a risk of fire setting behaviour.

Callous-unemotional traits have not previously been examined among fire setting youth. The results of the present study indicated that all participants showed similar levels of unemotionality, which is also in line with the finding that affective empathy appeared relatively unimpaired. This corroborates previous reports that the unemotional subscale of the inventory of callous-unemotional traits appears closely related to emotional functioning (Kimonis *et al.*, 2008). Thus, neither fire setters nor non-fire setting antisocial adolescents in the current sample appeared to have no difficulties with experiencing the emotions of others, nor with emotional expression. However, both fire setting and non-fire setting antisocial adolescents showed high scores on the uncaring subscale. A similar pattern of low cognitive empathy and high levels of uncaring traits was also reported by Muñoz and colleagues (2011). What additionally distinguished fire setters from both other groups was a high level of callousness. Both Essau, Sasagawa, & Frick (2006) and Roose *et al.* (2010) have shown that antisocial behaviour was most closely related to uncaring and callous traits, rather than unemotional traits, however neither of these studies examined specific behaviours such as fire setting, within the broader category of antisocial behaviour.

In summary, the present study highlights the role of high impulsivity, low cognitive empathy, and a high degree of uncaring and callous traits for the adolescent fire setters in our sample. While low cognitive empathy and uncaring traits were shared with non-fire setting antisocial adolescents, the additional presence of high impulsivity and callous traits emerged as correlates of fire setting behaviour. Lastly, the regression model showed that impulsivity conferred a greater risk for increased frequency of fire setting than callousness.

### **4.3 Clinical implications**

Although the current sample of fire setters was not characterised by markedly heightened fire interest in and attraction to fire, fire interest was nonetheless highest among the fire setter group, suggesting that some degree of fire curiosity was present. Clinicians may come across adolescents with such characteristics in services, and may wish to assess impulsivity, careless and callous traits, as well as low cognitive empathy, when completing risk assessments in relation to adolescent fire setting. It is plausible that low cognitive empathy and a high degree of callous and careless traits confers a risk of limited perspective-taking. In combination with high impulsivity, this may present a considerable risk for fire setting behaviours, causing costly damage. The costs associated with fire setting may not be immediately observable to the individual, for example when individuals leave the scene of an unsanctioned fire. The current findings indicate that adolescent fire setters were able to experience adequate affective empathy, but showed low cognitive empathy. Thus, interventions for problem behaviours which include fire setting in forensic services may be able to capitalize on adolescents' ability to feel

other's emotional distress, in order to increase perspective-taking and understanding of consequences and understanding of the risks of fire setting behaviours, even when frequency is relatively low. Such interventions may also need to acknowledge the role of impulsivity, and aim to increase skills of impulse regulation and behavioural self-control.

#### **4.4 Strengths and limitations of the current study**

##### *4.4.1 Strengths*

The current study examined a number of variables previously indicated to be important in adolescent fire setting, using psychometrically valid and reliable measures obtained in self-report form. This is in contrast with many previous studies which have utilized parental, clinical or legal report, for example when measuring constructs such as empathy or fire interest. The study was able to recruit a sufficient number of participants to perform adequately powered statistical analyses.

In addition, the current study attempted to identify clinically-relevant variables which characterize adolescent fire setters, over and above adolescents with problematic, antisocial behaviours more generally. To this end, the study recruited two comparison groups in addition to adolescent fire setters – a group of adolescents characterised by problem behaviours for which they were either referred to forensic services or excluded from mainstream schooling, and a control group of mainstream secondary school pupils who were not currently in contact with forensic services. Although no double dissociations emerged – i.e. no significant group differences existed between fire setters

and non-fire setting antisocial adolescents – nonetheless a number of correlates characterised fire setters but not the other two groups.

#### *4.4.2 Limitations*

Inspection of fire setting frequency, as well as the absence of significantly higher fire interest in the fire setter group suggests that it is possible that interest, curiosity and attraction to fire were not important motivating factors for those adolescents in the fire setting group of the present study. This is most likely due to the fact that participants in the current sample were not required to have a formal conviction of arson to be eligible for participation. Although forensic services were approached with a call for participants who were currently engaged in fire setting behaviour, this yielded minimal eligible recruits, and the majority of participants in the fire setting group were identified through self-report on the FIQ. It is likely that this led to a sample of participants who are not on the severe end of the spectrum of fire setting behaviour, and the same may be true for fire interest. From this perspective, it must be considered that the correlates which emerged as important from this study – low cognitive empathy, uncaring and callous traits, and particularly impulsivity – are likely only characteristic of a subset of fire setters, who do not engage in sufficiently severe fire setting to be referred for clinical intervention or involvement with the criminal justice system, and who may also not show heightened fire interest. Instead, these correlates may characterise young people who may be motivated by a variety of other factors, and who nonetheless engage in relatively mild fire setting, which may nonetheless be dangerous, risky and costly.



A number of methodological limitations must be considered in evaluating the present study. Firstly, fire setting and associated characteristics were examined in the form of self-report only, and thus may be less reliable than if a combination of self- and other report (e.g. parental or teacher report) had been used. Unfortunately it was not possible to obtain corroborating reports from additional sources. Secondly, the study did not assess motivation for fire setting, which may have helped to further put the findings regarding fire interest and attentional bias into context. Similarly, the FIQ does not prompt participants to elaborate on specific incidences of fire setting, therefore it is likely that adolescents understood the fire setting frequency item in a number of ways (e.g. setting fire to a range of small to larger objects).

Since motivation for fire setting was not assessed, it is difficult to integrate the results of the current study with previously proposed motivational typologies of fire setting. Based on reported fire setting frequency and fire interest, it appears that the current sample of fire setters most closely resemble (Del Bove & Mackay, 2011)'s proposed category of "conventional" fire setter, marked by low frequency fire setting and relatively low fire interest. Since only very specific characteristics were assessed, it is also difficult to relate the present findings to other theoretical frameworks, such as those derived from functional analyses of fire setting behaviour (Fineman, 1995; Jackson, Glass, *et al.*, 1987) or the more recent Multi-Trajectory Theory of Adult Fire Setting (Gannon *et al.*, 2012), as many of the factors deemed important in these accounts were not addressed in the present study.

Furthermore, in terms of characterisation of the sample, the non-fire setting antisocial group was not formally assessed for antisociality or specific problem behaviours,

although all participants in this group were either attending forensic services due to problematic behaviours or had been excluded from mainstream schooling due to antisocial behaviours which could not be managed in mainstream educational services. In terms of demands on participants' time and efforts to concentrate, a delicate balance needed to be struck between encouraging conscientious responding and ensuring short testing sessions, particularly in the environment of pupil referral units, where adolescents were highly distracted and often poorly motivated to participate. For this reason, minimal data sets were collected from participants for this study. Lastly, with regard to sample size and characteristics, the non-fire setting group is not matched in size to the other two groups, due to time constraints for recruitment for this project. This time constraint also prevented accurate gender matching across groups, which may have affected the distribution of some variables, such as affective empathy. Sample size also restricted the amount of predictor variables entered into the regression model to predict fire setting frequency, as a sample size of 26 allowed a maximum of two predictor variables. Given that fire setters differed from school controls on four characteristics, two of which were not shared with non-fire setting antisocial participants, it may have been beneficial to examine all four of these variables in relation to fire setting frequency, with a sample of 40 or more fire setters. In the regression analysis performed here, over 80% of variance remains unaccounted for in predicting fire setting frequency, thus future studies may wish to account for this using a range of potentially relevant variables.

#### **4.5 Suggestions for future research**

Future studies may benefit from utilizing both a lexical and pictorial Stroop task to assess attentional bias towards fire-related material and its relationship to fire interest, in order to clarify whether the modified Stroop task can be used as a clinical tool to aid self-report measures and perhaps assist with risk assessment for fire setters. The relationship between fire interest and accuracy on fire items on the Stroop demonstrated in the current study is encouraging, however it is possible that the Stroop task in pictorial form is better able to tap into participants' fire interest schemas than the lexical version of the task. To address this hypothesis, it would also be of benefit to recruit participants who show high levels of fire interest. With the use of a larger sample of fire setters, who may display a wider range of levels of fire interest and fire setting frequency, it may be possible to examine the clinical usefulness of the Stroop task more efficiently.

A key question arising from the current findings is whether further combination of the factors identified as important for distinguishing fire setters from non-fire setters increases their predictive value, however only two predictor variables were entered into the regression model. Future studies should therefore aim to assess impulsivity, callousness, uncaring traits and low cognitive empathy among a sufficiently large sample to understand their relative merit, both alone and in combination, for informing assessment of risk for frequent fire setting. In order to understand whether these identified variables also allow prediction of repeated fire setting, future longitudinal studies should also be carried out, whereby fire setting would be assessed at a number of time-points. This would also clarify the role of developmental change in the variables

identified, particularly impulsivity, which may increase or decrease in predictive validity over the course of development, depending on fire interest levels. Lastly, future studies should aim to incorporate an assessment of motivation for fire setting, both general and for specific instances, as well as increasing validity of self-report measures by obtaining parent- or teacher reports, wherever possible.

#### **4.6 Conclusion**

The current study examined correlates of adolescent fire setting, and also investigated the use of a novel modified Stroop task to assess attentional bias towards fire-related material among fire setting youth. Relevant correlates emerged which distinguished fire setting from non-fire setting antisocial and also school control participants, particularly impulsivity and callousness. However, heightened fire interest appeared not to characterise the current sample, and attentional bias towards fire-related words was not elicited using the modified Stroop task. Associations between Stroop task accuracy and fire interest did emerge, however, across the whole participant sample, which indicates that the Stroop was able to capture information processing bias towards fire material to some degree. Further studies are needed to optimize the modified Stroop task as a potential clinical tool to aid assessments of forensic groups.

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## **6 Appendices**

### **Appendix A: Ethical approval documents**

## **Appendix B: Letters to gatekeeper organisations and services**

## **Appendix C: Measures**

**WIAT-II Word Reading subtest – word list and scoring sheet**

## **TAPP-C Fire Interest Questionnaire**

**Barratt Impulsiveness Scale (BIS-11), adapted for adolescents**

## **Basic Empathy Scale (BES)**



## **Inventory of Callous-Unemotional Traits (ICU)**

## **Appendix D: Information and consent sheets**

## **NRES Committee North East - Northern & Yorkshire**

Room 002  
TEDCO Business Centre  
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Jarrow, Tyne & Wear  
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08 March 2012

Dr Doreen Hoerold  
Trainee Clinical Psychologist  
King's College London  
Addiction Sciences Building, 3rd Floor/Trainee Room  
Institute of Psychiatry  
4 Windsor Walk  
London  
SE5 8AF

Dear Dr Hoerold

<b>Study title:</b>	<b>Correlates of adolescent fire setting: examining the role of fire interest, attentional bias, impulsivity and empathy</b>
<b>REC reference:</b>	<b>12/NE/0032</b>
<b>Protocol number:</b>	<b>N/A</b>

Thank you for your letter of 27 February 2012, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair.

### **Confirmation of ethical opinion**

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation, subject to the conditions specified below.

### **Ethical review of research sites**

NHS sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Non-NHS sites

### Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

*Management permission ("R&D approval") should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements.*

Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at <http://www.rdforum.nhs.uk>.

*Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.*

*For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.*

*Sponsors are not required to notify the Committee of approvals from host organisations*

**It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).**

### Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

<i>Document</i>	<i>Version</i>	<i>Date</i>
Covering Letter		27 February 2012
Participant Consent Form: Consent form for 12-14 year old participants	Version 2	24 February 2012
Participant Consent Form: Consent form for parents/guardians - Research Project on fire setting in your people	Version 2	25 February 2012
Participant Consent Form: Consent form for 15-18 year old participants	Version 2	24 February 2012
Participant Information Sheet: Participant information Sheet for 15-18 year old fire setters	Version	
Participant Information Sheet:	Version 2	24 February 2012

Participant Information Sheet for 15-18 year old school controls		
Participant Information Sheet: Information sheet for parents of school controls - Research project: Fire setting in young people	Version 2	24 February 2012
Participant Information Sheet: Information sheet for parents of fire setters - Research project: Fire setting in young people	Version 2	24 February 2012
Participant Information Sheet: Information sheet for parents of offender groups	Version 2	24 February 2012
Participant Information Sheet: Participant Information Sheet for 15-18 year old offending controls	Version 2	24 February 2012
Participant Information Sheet: Participant Information Sheet for 12-14 year old fire setters	Version 2 (created in response to REC suggestions)	24 February 2012
Participant Information Sheet: Participant Information Sheet for 12-14 year old offending controls	Version 2 (created in response to REC suggestions)	24 February 2012
Participant Information Sheet: Participant Information Sheet for 12-14 year old school controls	Version 2 (created in response to REC suggestions)	24 February 2012
Questionnaire: Word Reading		
Questionnaire: BES		
Questionnaire: TAPP-C Fire Interest		
Questionnaire: ICU (Youth Version)		
REC application	Version 3.4	13 January 2012
Response to Request for Further Information		

### **Statement of compliance**

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

### **After ethical review**

#### Reporting requirements

The attached document “*After ethical review – guidance for researchers*” gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
  - Adding new sites and investigators

- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study

The NRES website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

#### Feedback

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the website.

Further information is available at National Research Ethics Service website > After Review

<b>12/NE/0032</b>	<b>Please quote this number on all correspondence</b>
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With the Committee's best wishes for the success of this project

Yours sincerely

**Professor Peter Heasman**  
**Chair**

Email: hayley.jeffries@nhs.net

<i>Copy to:</i>	<i>Jenny Liebscher, South London &amp; Maudsley NHS Foundation Trust/Institute of Psychiatry</i>
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# SLaM CAMHS Research Practice Approval Application Form

## To be completed by principal researcher and approved by the CAMHS research approval committee

PLEASE COMPLETE AS INDICATED AND RETURN TO SENDER

*The table should expand to fit text*

<b>Title of research project</b>	Correlates of adolescent fire setting: examining the role of fire interest, attentional bias, impulsivity and empathy
<b>Main researcher</b> <i>(Name, profession, place of work or study)</i>	Doreen Hoerold, Trainee Clinical Psychologist, Institute of Psychiatry, King's College London
<b>Other researchers</b> <i>(Name, profession, place of work or study)</i>	<ul style="list-style-type: none"> <li>• Dr Troy Tranah, Consultant Clinical Psychologist, Michael Rutter Centre; &amp; Lecturer in Clinical Psychology, Institute of Psychiatry, King's College London</li> <li>• Dr Matt Woolar, Clinical Psychologist, Michael Rutter Centre; &amp; Lecturer in Clinical Psychology, Institute of Psychiatry, King's College London</li> </ul>
<b>Department, area, or clinical setting where the research will take place</b>	SLaM CAMHS (Michael Rutter Centre)
<b>When will the research be taking place?</b> <i>(specify dates and duration)</i>	Start: March 2012 (following approval from SLaM REC and R & D) End: July 2013 (to coincide with thesis submission for DClIn Psychology for Doreen Hoerold)
<b>The main purpose of the research</b> <i>(please state briefly the hypothesis or area of concern that is being examined, and the importance for CAMHS)</i>	<p>The study aims to examine a number of personality and neuropsychological characteristics among adolescent fire setters (aged 12-18), and compare these characteristics to those of a group of non-fire setting adolescent offenders and a non-offending control group. Specifically, we will compare groups on:</p> <ul style="list-style-type: none"> <li>- Fire interest</li> <li>- Attentional processing bias towards fire-related stimuli</li> <li>- Impulsivity</li> <li>- Callous-unemotional traits</li> <li>- Cognitive and affective empathy</li> </ul> <p>We hypothesize that adolescent fire-setters will show attentional bias towards fire-related stimuli, and we will examine the relationship between the frequency of fire setting behaviour, and this bias, while controlling for the additional neuropsychological and personality characteristics described above, which have previously been described in this group.</p> <p>This study will provide valuable information about cognitive processes in adolescent fire-setters, which frequently present to CAMH services that work closely with forensic services.</p>

# SLaM CAMHS Research Practice Approval Application Form

## To be completed by principal researcher and approved by the CAMHS research approval committee

PLEASE COMPLETE AS INDICATED AND RETURN TO SENDER

*The table should expand to fit text*

<b>Does the research form part of an academic programme?</b> <i>(please specify)</i>	Yes: Doctorate in Clinical Psychology
<b>If so, who is the Academic Supervisor</b>	Dr Troy Tranah (primary) and Dr Matt Woolgar (secondary)
<b>Has the research received ethical approval?</b>	Awaiting ethical review at present (REC meeting: 10 February 2012, reference: 12/NE/0032)
<b>Has the research been considered for local R&amp;D approval?</b>	This is currently being applied for, and R & D have advised that they are awaiting CAG approval
<b>Overall method of the research</b>	Quantitative: Questionnaire-based and through use of a short, computerized RT task
<b>Data collection method</b> <i>(including the plan for obtaining input from Service Users at either the design, implementation, or outcome stage of the research)</i>	Participants will be identified as meeting inclusion criteria from case files (e.g. where a history of fire setting is documented), and invited to participate in the study. Testing will take place in the Michael Rutter Centre, or the psychology research rooms at the Institute of Psychiatry. No undue pressure will be placed on participants to take part, and full informed consent will be obtained prior to participation. For those under the age of 16, this will also be obtained from parents/legal guardians. Participants will only be required to attend once, with no follow-up sessions required. Sessions will last a maximum of 60 minutes, with appropriate breaks as needed. Participants will be thanked for their participation with a £10 high street voucher. Unfortunately, due to the time constraints on the chief researcher for this study (Doreen Hoerold), input from service users at the design stage of the study could not be obtained, as the research piece must be completed on a part-time basis and submitted by July 2013. However, summaries of the outcome will be made available to all participants via their care team, and feedback will be invited.
<b>What is the expected impact on the sample / subjects of the research?</b>	No distress or discomfort to participants is expected to arise as a result of their participation in this study. Where sensitive information is discussed with participants or psychological distress is disclosed, the researcher will discuss this with the relevant care team of the participants, as well as with the clinical staff within the research team.
<b>Please attach any additional documents, such as concise research proposals, methodology outline etc, which will help the decision about practice approval</b>	Please see attached Study Protocol. The proposal for this study has been approved by the core team of the clinical psychology course at the Institute of Psychiatry.



**SLaM CAMHS Research Practice Approval Application Form**  
**To be completed by principal researcher and approved by the**  
**CAMHS research approval committee**

PLEASE COMPLETE AS INDICATED AND RETURN TO SENDER

*The table should expand to fit text*

Approved by	Michael Buxton
(On behalf of the CAMHS Research committee	
Date	02/03/12

Dr Doreen Hoerold  
Trainee Clinical Psychologist  
Addiction Sciences Building  
3<sup>rd</sup> Floor/Trainee Room  
Institute of Psychiatry  
4 Windsor Walk  
London SE5 8AF

14 May 2012

Dear Dr Hoerold

**Trust Approval: R&D2012/035 Title** Correlates of adolescent fire setting:  
examining the role of fire interest, attentional bias, impulsivity and empathy

I am writing to confirm approval for the above research project at South London and Maudsley NHS Foundation Trust. This approval relates to work in the Child and Adolescent Mental Health Services CAG and to the specific protocol and informed consent procedures described in your R&D Form. Any deviation from this document will be deemed to invalidate this approval. Your approval number has been quoted above and should be used at all times when contacting this office about this project.

Amendments, including extending to other Trust directorates will require further approval from this Trust and where appropriate the relevant Research Ethics Committee. Amendments should be submitted to this R&D Office by completion of an R&D Amendment form together with any supporting documents. A copy of this is attached but is also available on the R&D Office website.

[http://www.iop.kcl.ac.uk/iopweb/blob/downloads/locator/I\\_314\\_RD\\_Approval\\_Amendment\\_Form\\_V2.doc](http://www.iop.kcl.ac.uk/iopweb/blob/downloads/locator/I_314_RD_Approval_Amendment_Form_V2.doc)

I can confirm that King's College London will be taking on the role of Sponsor for this study.

Approval is provided on the basis that you agree to adhere to the Department of Health's Research Governance requirements including:

- Ethical approval must be in place prior to the commencement of this project.
- As Chief Investigator and/or Principal Investigator for this study you have familiarised yourself with, and accept the responsibilities commensurate with this position, as outlined in the Research Governance Framework

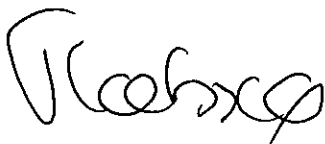
- ([http://www.dh.gov.uk/prod\\_consum\\_dh/groups/dh\\_digitalassets/@dh/@en/documents/digitalasset/dh\\_4122427.pdf](http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4122427.pdf)).
- Compliance with all policies and procedures of the Trust which relate to research, and with all relevant requirements of the Research Governance Framework. In particular the Trust Confidentiality Policy.  
[http://www.iop.kcl.ac.uk/iopweb/blob/downloads/locator/I\\_313\\_SLaM\\_Confidentiality\\_Policy\\_v4.pdf](http://www.iop.kcl.ac.uk/iopweb/blob/downloads/locator/I_313_SLaM_Confidentiality_Policy_v4.pdf)
- Co-operating with the Trust R&D Office's regular monitoring and auditing of all approved research projects as required by the research governance framework, including complying with ad hoc requests for information.
- Informing the Trust's Health and Safety Coordinators and/or the Complaints Department or of any adverse events or complaints, from participants recruited from within this Trust, which occurs in relation to this study in line with Trust policies. Contact details are available from the R&D Office if required.
- Sending a copy of any reports or publications which result from this study to the Trust Departments involved in the study if requested.
- Honorary Contracts must be in place prior to patient contact for all relevant members of the research team. Advice on this will be provided by the R&D Office at the point of obtaining R&D approval and on an ongoing basis for new members of staff joining the research team.
- Sending a copy of the annual reports and end of project notification submitted to ethics.

Failure to abide by the above requirements may result in the withdrawal of the Trust's approval for this research.

If you wish to discuss any aspect of this research approval with the R&D Office, please contact Jenny Liebscher [jennifer.liebscher@kcl.ac.uk](mailto:jennifer.liebscher@kcl.ac.uk) in the first instance.

I wish you every success with this study.

Yours sincerely



**Jenny Liebscher**  
**R&D Governance and Delivery Manager**  
**SLaM/IoP R&D Office**

Enc. R&D Approval Amendment Form

Doreen Hoerold  
3rd Floor Trainee Room  
Addiction Sciences Building  
4 Windsor Walk  
LONDON  
SE5 8AF

18 May 2012

Dear Doreen,

**PNM/11/12-93 Correlates of adolescent fire setting: examining the role of fire interest, attentional bias, impulsivity and empathy.**

Review Outcome: Full Approval

Thank you for sending in the amendments/clarifications requested to the above project. I am pleased to inform you that these meet the requirements of the PNM RESC and therefore that full approval is now granted.

Please ensure that you follow all relevant guidance as laid out in the King's College London Guidelines on Good Practice in Academic Research (<http://www.kcl.ac.uk/college/policyzone/index.php?id=247>).

For your information ethical approval is granted until 18 May 2013. If you need approval beyond this point you will need to apply for an extension to approval at least two weeks prior to this explaining why the extension is needed, (please note however that a full re-application will not be necessary unless the protocol has changed). You should also note that if your approval is for one year, you will not be sent a reminder when it is due to lapse.

Ethical approval is required to cover the duration of the research study, up to the conclusion of the research. The conclusion of the research is defined as the final date or event detailed in the study description section of your approved application form (usually the end of data collection when all work with human participants will have been completed), not the completion of data analysis or publication of the results. For projects that only involve the further analysis of pre-existing data, approval must cover any period during which the researcher will be accessing or evaluating individual sensitive and/or un-anonymised records. Note that after the point at which ethical approval for your study is no longer required due to the study being complete (as per the above definitions), you will still need to ensure all research data/records management and storage procedures agreed to as part of your application are adhered to and carried out accordingly.

If you do not start the project within three months of this letter please contact the Research Ethics Office.

Should you wish to make a modification to the project or request an extension to approval you will need approval for this and should follow the guidance relating to modifying approved applications:  
<http://www.kcl.ac.uk/innovation/research/support/ethics/applications/modifications.aspx>

The circumstances where modification requests are required include the addition/removal of participant groups, additions/removal/changes to research methods, asking for additional data from participants, extensions to the ethical approval period. Any proposed modifications should only be carried out once full approval for the modification request has been granted.

Any unforeseen ethical problems arising during the course of the project should be reported to the approving committee/panel. In the event of an untoward event or an adverse reaction a full report must be made to the Chair of the approving committee/review panel within one week of the incident.

Please would you also note that we may, for the purposes of audit, contact you from time to time to ascertain the status of your research.

If you have any query about any aspect of this ethical approval, please contact your panel/committee administrator in the first instance (<http://www.kcl.ac.uk/innovation/research/support/ethics/contact.aspx>). We wish you every success with this work.

Yours sincerely,

James Patterson – Senior Research Ethics Officer

Cc: Troy Tranah

Doreen Hoerold  
3rd Floor Trainee Room  
Addiction Sciences Building  
4 Windsor Walk  
London SE5 8AF

06 July 2012

Dear Doreen

**PNM/11/12-93 Correlates of adolescent fire setting: examining the role of fire interest, attentional bias, impulsivity and empathy.**

Thank you for submitting a modification request for the above study. I am writing to confirm approval of this and the modification is summarised below:

1. Recruitment to the study will include UK wide juvenile Firesetter Intervention Programmes.

If you have any questions regarding this application please contact the Research Ethics Office.

Yours sincerely

Catherine Fieulleateau  
Senior Research Ethics Officer

Doreen Hoerold  
3rd Floor Trainee Room  
Addiction Sciences Building  
4 Windsor Walk  
London SE5 8AF

15 March 2013

Dear Doreen

**PNM/11/12-93 Correlates of adolescent fire setting: examining the role of fire interest, attentional bias, impulsivity and empathy.**

Thank you for submitting a modification request for the above study. I am writing to confirm approval of this. The modification is summarised below:

- To extend the recruitment of participants to include London-based Pupil Referral Units.

If you have any questions regarding this application please contact the Research Ethics Office.

Yours sincerely

Rebecca Cowper  
Research Support Assistant

**Information letters to recruitment sites:**

**Letter to Youth Offending Teams**

[Name of YOT Manager  
Address  
Town  
Postcode]

**Research study "Correlates of adolescent fire setting:**

**Examining the role of fire interest, attentional bias, impulsivity and empathy**

Dear .....,

I am writing to you to tell you about a study we are conducting in the Department of Psychology at Kings College. For this project, we are approaching secure training units, Youth Offending Teams and secondary schools to participate. This study is part of a doctoral research project and has been approved by the King's College London Psychiatry, Nursing and Midwifery (PNM) Research Ethics Subcommittee (RESC) (ref: PNM 1112 93).

**Why is the study being done?**

We want to find out some things about young people who often deliberately set fires, so that we can develop better prevention and treatment programmes. At the moment, we do not have a lot of knowledge about what makes young people set fires. We also do not know how they think and feel about fire, how they process other people's feelings, and how well they are able to stop themselves from getting involved with fire setting.

The aim of this study is to try to find out what characteristics are specific to young fire setters, and which are the same as other people who have committed a criminal offence. We therefore would like to involve:

- 1) young offenders who have deliberately set at least one fire in the past
- 2) young offenders who have not deliberately started a fire
- 3) young people who have never committed a criminal offence

We are hoping to work with your team and ask the adolescents you work with to participate in the study.



### **What will this involve?**

- We will first request participants' permission to access case files, in order to ensure that they meet inclusion criteria for our study.
- After obtaining the adolescents' consent, and for those below age 16, parental consent, the researcher will arrange time slots for the adolescents to complete an individual session. This will take around 1 hour, and involves the participant completing some questionnaires, a short reading task, and a short computerized task, measuring reaction times.
- These sessions take place at the Institute of Psychiatry, King's College London, Denmark Hill, London SE5 8AF.
- **Important:** As potentially distressing topics will be discussed with participants during the study, our approach is to discontinue the testing session if a participant experiences distress or discomfort, and share this information with the participant's care team. Permission to follow this procedure will be sought from participants beforehand.

### **Why should we participate?**

- We are aware of the many demands on your time. We feel however that this study is important because it will help us to understand more about fire setting among young people, which could in turn help us develop prevention and treatment programmes for young offenders.
- To thank the adolescents for their participation, we will be offering them a £10 gift voucher for a high street shop.

I will contact you within 2 weeks to discuss the project in more detail and answer any questions you may have. I am also happy to arrange a meeting to come to your centre to discuss the research in more detail. You are under no obligation to reply to this letter, however if you choose to, participation in this research is voluntary and you may withdraw at any time, until 30 June 2013.

Thank you for taking the time to consider this proposal. I look forward to speaking with you.

Yours sincerely,

Doreen Hoerold  
Trainee Clinical Psychologist

Email: doreen.hoerold@kcl.ac.uk

Dr Troy Tranah  
Consultant Clinical Psychologist

Email: troy.tranah@kcl.ac.uk

**Information letters to recruitment sites:**

**Letter to Fire Intervention Programmes**

[Name of Programme Manager  
Address  
Town  
Postcode]

**Research study "Correlates of adolescent fire setting:**

**Examining the role of fire interest, attentional bias, impulsivity and empathy**

Dear .....,

I am writing to you to tell you about a study we are conducting in the Department of Psychology at Kings College, London. For this project, we are approaching a number of services and programmes that work with juvenile firesetters, to participate. This study is part of a doctoral research project and has been approved by the King's College London Psychiatry, Nursing and Midwifery (PNM) Research Ethics Subcommittee (RESC) (ref: PNM 1112 93).

**Why is the study being done?**

We want to find out some things about young people who often deliberately set fires. We hope that our findings can help services to develop better prevention and treatment programmes. At the moment, we do not have a lot of knowledge about what makes young people set fires. We also do not know how they think and feel about fire, how they process other people's feelings, and how well they are able to stop themselves from getting involved with fire setting.

The aim of this study is to try to find out what characteristics are specific to young fire setters, and which are the same as other people who have committed a criminal offence. We therefore would like to involve:

- 1) young offenders who have deliberately set at least one fire in the past
- 2) young offenders who have not deliberately started a fire
- 3) young people who have never committed a criminal offence

We are hoping to work with your team and ask the adolescents you work with to participate in the study.

**What will this involve?**

- We will first request participants' permission to access case files, in order to ensure that they meet inclusion criteria for our study.
- After obtaining the adolescents' consent, and for those below age 16, parental consent, the researcher will arrange time slots for the adolescents to complete an individual session. This will take around 1 hour, and involves the participant completing some questionnaires, a short reading task, and a short computerized task, measuring reaction times.
- **Important:** As potentially distressing topics will be discussed with participants during the study, our approach is to discontinue the testing session if a participant experiences distress or discomfort, and share this information with the person who referred the participant to your programme. Permission to follow this procedure will be sought from participants beforehand.

**Why should we participate?**

- We are aware of the many demands on your time. We feel however that this study is important because it will help us to understand more about fire setting among young people, which could in turn help us improve prevention and treatment programmes for young offenders.
- To thank the adolescents for their participation, we will be offering them a £10 gift voucher for a high street shop.

I will contact you within 2 weeks to discuss the project in more detail and answer any questions you may have. I am also happy to arrange a meeting to come to your service to discuss the research in more detail. You are under no obligation to reply to this letter, however if you choose to, participation in this research is voluntary and you may withdraw at any time, until 30 June 2013.

Thank you for taking the time to consider this proposal. I look forward to speaking with you.

Yours sincerely,

Doreen Hoerold  
Trainee Clinical Psychologist

Email: doreen.hoerold@kcl.ac.uk

Dr Troy Tranah  
Consultant Clinical Psychologist

Email: troy.tranah@kcl.ac.uk

**Information letters to recruitment sites:**

**Letter to secondary schools**

[Name of Principle  
Address  
Town  
Postcode]

**Research study "Correlates of adolescent fire setting:**

**Examining the role of fire interest, attentional bias, impulsivity and empathy**

Dear .....,

I am writing to you to tell you about a study we are conducting in the Department of Psychology at Kings College. For this project, we are approaching secure training units, Youth Offending Teams and secondary schools to participate. This study is part of a doctoral research project and has been approved by the King's College London Psychiatry, Nursing and Midwifery (PNM) Research Ethics Subcommittee (RESC) (ref: PNM 1112 93).

**Why is the study being done?**

We want to find out some things about young people who often deliberately set fires, so that we can develop better prevention and treatment programmes. At the moment, we do not have a lot of knowledge about what makes young people set fires. We also do not know how they think and feel about fire, how they process other people's feelings, and how well they are able to stop themselves from getting involved with fire setting.

The aim of this study is to try to find out what characteristics are specific to young fire setters, and which are the same as other people who have committed a criminal offence. We therefore would like to involve:

- 1) young offenders who have deliberately set at least one fire in the past
- 2) young offenders who have not deliberately started a fire
- 3) young people who have never committed a criminal offence

We are hoping to work with your school and ask pupils between the ages of 12 and 18 to participate in the study. This is because we are now recruiting young people who have not committed a criminal offence in the past.

**What will this involve?**

- After obtaining the adolescents' consent, and for those below age 16, parental consent, the researcher will arrange time slots for the adolescents to complete an individual session. This will take around 1 hour, and involves the participant completing some questionnaires, a short reading task, and a short computerized task, measuring reaction times.
- **Important:** As potentially distressing topics will be discussed with participants during the study, our approach is to offer a break immediately, and allow a choice to continue the testing session if a participant experiences distress or discomfort, and share this information with the participant's care team. Permission to follow this procedure will be sought from participants beforehand.

**Why should we participate?**

- We are aware of the many demands on your time. We feel however that this study is important because it will help us to understand more about fire setting among young people, which could in turn help us develop prevention and treatment programmes for young offenders.
- To thank the adolescents for their participation, we will be offering them a £10 gift voucher for a high street shop.

I will contact you within 2 weeks to discuss the project in more detail and answer any questions you may have. I am also happy to arrange a meeting to come to your school to discuss the research in more detail. You are under no obligation to reply to this letter, however if you choose to, participation in this research is voluntary and you may withdraw at any time, until 30 June 2013.

Thank you for taking the time to consider this proposal. I look forward to speaking with you.

Yours sincerely,

Doreen Hoerold  
Trainee Clinical Psychologist

Email: doreen.hoerold@kcl.ac.uk

Dr Troy Tranah  
Consultant Clinical Psychologist

Email: troy.tranah@kcl.ac.uk



Wechsler Individual Achievement Test®  
Second UK Edition



- |          |           |         |        |
|----------|-----------|---------|--------|
| <b>A</b> | the       | up      | you    |
|          | school    | into    | so     |
|          | then      | fly     | sea    |
|          | swim      | how     | people |
|          | because   | again   | where  |
|          | small     | closed  | know   |
|          | stood     | size    | wrong  |
|          | between   | instead | ocean  |
| <b>B</b> | knock     | fruit   | shut   |
|          | carefully | goal    | sight  |
|          | crowd     | enough  | during |
| <b>C</b> | flexible  | known   | equal  |

---

D	fraction	design	smudge
	oxygen	column	thumbnail
	rhythm	courage	determine
E	ajar	apology	pier
F	ruin	dozing	useless
	ideally	deputy	cutlery
	phonograph	poise	unique
	pathetic	cleanse	chord
	acquire	scholar	treacherous
	veterinary	ridicule	vicinity
	negotiate	catastrophe	infamous
	topography	naive	subtle
	bureau	plethora	reminisce
	conscience	indefatigable	malign
	indigenous	euphemism	milieu
	antithesis	ethereal	hierarchical

ISBN 0-7491-2821-6



# Word Reading



## Reverse Rule

Score of 0 on **any** of the first 3 items given, administer the preceding items in reverse order until 3 consecutive scores of 1



## Discontinue Rule

After 7 consecutive scores of 0

Ages 4-5



Item	Response			Score
1.	c	e	a	0 1
2.	u	w	m	0 1
3.	d	p	b	0 1
4.	o			0 1
5.	c			0 1
6.	x			0 1
7.	s			0 1
8.	k			0 1
9.	z			0 1
10.	e			0 1
11.	w			0 1
12.	r			0 1
13.	p			0 1
14.	m			0 1
15.	i			0 1
16.	y			0 1
17.	v			0 1
18.	n			0 1
19.	a			0 1
20.	h			0 1
21.	j			0 1
22.	u			0 1
23.	f			0 1
24.	t			0 1
25.	b			0 1
26.	l			0 1
27.	g			0 1
28.	d			0 1
29.	q			0 1
30.	hat	mat	sun	0 1
31.	fish	duck	dish	0 1
32.	fly			0 1
33.	star			0 1
34.	bat	bike	truck	0 1
35.	man	van	mud	0 1
36.	flag	frog	freeze	0 1
37.	fish	clock	duck	0 1
38.	clip	drip	plum	0 1
S1	pan			
39.	cat			0 1
40.	mop			0 1

Age 6



Age 8



(A)

Item	Response	Score	>3"	SC
41. shell	0 1			
42. a	0 1			
43. w	0 1			
44. g	0 1			
45. st	0 1			
46. dr	0 1			
47. sh	0 1			
48. the	0 1			
49. up	0 1			
50. you	0 1			
51. school	0 1			
52. into	0 1			
53. so	0 1			
54. then	0 1			
55. fly	0 1			
56. sea	0 1			
57. swim	0 1			
58. how	0 1			
59. people	0 1			
60. because	0 1			
61. again	0 1			
62. where	0 1			
63. small	0 1			
64. closed	0 1			
65. know	0 1			
66. stood	0 1			
67. size	0 1			
68. wrong	0 1			
69. between	0 1			
70. instead	0 1			
71. ocean	0 1			
72. knock	0 1			
73. fruit	0 1			
74. shut	0 1			
75. carefully	0 1			
76. goal	0 1			
77. sight	0 1			
78. crowd	0 1			
79. enough	0 1			
80. during	0 1			

Age 9



(B)

Age 7





# Word Reading (continued)

Age 10  

Age 11  

ges 2-13  


ges 1-21  

Item	Response	Score	>3"	SC
81.	flexible	0 1		
82.	known	0 1		
83.	equal	0 1		
84.	fraction	0 1		
85.	design	0 1		
86.	smudge	0 1		
87.	oxygen	0 1		
88.	column	0 1		
89.	thumbnail	0 1		
90.	rhythm	0 1		
91.	courage	0 1		
92.	determine	0 1		
93.	ajar	0 1		
94.	apology	0 1		
95.	pier	0 1		
96.	ruin	0 1		
97.	dozing	0 1		
98.	useless	0 1		
99.	ideally	0 1		
100.	deputy	0 1		
101.	cutlery (kət'-la-rē)	0 1		
102.	phonograph	0 1		
103.	poise	0 1		
104.	unique	0 1		
105.	pathetic	0 1		
106.	cleanse	0 1		

Item	Response	Score	>3"	SC
107.	chord	0 1		
108.	acquire	0 1		
109.	scholar	0 1		
110.	treacherous	0 1		
111.	veterinary (ve'-tə-rə-ner'-ē)	0 1		
112.	ridicule	0 1		
113.	vicinity	0 1		
114.	negotiate	0 1		
115.	catastrophe	0 1		
116.	infamous (in'-fə-məs)	0 1		
117.	topography (tə-pä'-grə-fē)	0 1		
118.	naive (nä-ēv')	0 1		
119.	subtle (sut'-l)	0 1		
120.	bureau (byōōr'-ō)	0 1		
121.	plethora (ple'-thə-rə)	0 1		
122.	reminisce (re-mə-nis')	0 1		
123.	conscience	0 1		
124.	indefatigable	0 1		
125.	malign (mə-līn')	0 1		
126.	indigenous (in-dī'-jə-nəs)	0 1		
127.	euphemism (yü'-fə-mi'-zəm)	0 1		
128.	milieu (mēl-yə' or mel-yōō')	0 1		
129.	antithesis (an-ti'-thə-səs)	0 1		
130.	ethereal (i-thîr'-ē-əl)	0 1		
131.	hierarchical (hî-(ə)-rär-ki-kəl)	0 1		

Word Reading Total Raw Score

max = 131

  
Total >3"  
Tick Marks

  
Total SC  
Tick Marks

## Word Reading Qualitative Observations

Note how frequently a behaviour occurred by ticking the appropriate box.

	Never	Seldom	Often	Always	Not Observed
Substitutes a visually similar letter when identifying letters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provides nonword responses for rhyming words	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pronounces words automatically	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Laboriously "sounds out" words	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Self-corrects errors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Loses his/her place when reading words	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Makes accent errors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adds, omits, or transposes syllables when reading words	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# TAPP-C Fire Interest Questionnaire (Self-Report)

The Arson Prevention Program for Children

S. MacKay, Ph.D. & M. Hanson, M.D.

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- To be used only by TAPP-C trained mental health professionals.

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The Arson Prevention Program for  
Children  
Centre for Addiction and Mental Health  
University of Toronto

TAPP-C Family ID # \_\_\_\_\_

Date Completed \_\_\_\_\_

Name and Sex of TAPP-C Child/Youth \_\_\_\_\_

**Circle** the answer that **best** describes you. Ask any questions you have.

For every question: 0 = "Not At All," 1 = "Just A Little," 2 = "Pretty Much," 3 = "Very Much."

0 = NOT AT ALL

1 = JUST A LITTLE

2 = PRETTY MUCH

3 = VERY MUCH

0 1 2 3

1. I am interested in fire.

0 1 2 3

13. I have friends who play with matches/set fires.

0 1 2 3

2. I talk about fire.

0 1 2 3

14. I have started an accidental fire as a result of matchplay.

0 1 2 3

3. I am interested in firefighters, fire-engines, etc.

0 1 2 3

15. I am allowed to light the stove, barbecue, fireplace, campfire, when supervised.

0 1 2 3

4. When I grow up I want to be a firefighter.

0 1 2 3

16. I am allowed to light the stove, barbecue, fireplace, campfire, when not supervised.

0 1 2 3

5. I am interested in fire alarms, smoke detectors, etc.

0 1 2 3

17. I have started a fire at home (e.g., paper, Kleenex).

0 1 2 3

6. I like TV programs and movies about fire, explosions, etc.

0 1 2 3

18. I have started a fire at school (e.g., paper, garbage).

0 1 2 3

7. I like stories, books, articles about fire.

0 1 2 3

19. I have started a fire outside the home (e.g., leaves, garbage).

0 1 2 3

8. I dream about fire.

0 1 2 3

20. I have started a fire in a vacant area (e.g., field, alleyway).

0 1 2 3

9. I like watching others light matches, lighters, etc.

0 1 2 3

21. I have used fuel (e.g., gas, lighter fluid, oil) to light a fire.

0 1 2 3

11. I like to light the barbecue, fireplace, campfire, etc.

0 1 2 3

22. I have been burned (e.g., scalds, heat, flame; not sunburn).

0 1 2 3

12. I have played with matches when no adults were around.

**0 = NOT AT ALL****1 = JUST A LITTLE****2 = PRETTY MUCH****3 = VERY MUCH**

- |   |   |   |   |     |  |   |   |   |   |     |  |
|---|---|---|---|-----|--|---|---|---|---|-----|--|
| 0 | 1 | 2 | 3 | 23. | I have burned myself as a result of matchplay/fireplay.  | 0 | 1 | 2 | 3 | 41. | I still play with matches/lighter despite having fire safety education.                      |
| 0 | 1 | 2 | 3 | 24. | I collect matches, lighters, things to burn.   | 0 | 1 | 2 | 3 | 42. | I still set fires despite being punished for this.   |
| 0 | 1 | 2 | 3 | 25. | I collect burned items.  | 0 | 1 | 2 | 3 | 43. | I still set fires despite having fire safety education.                                      |
| 0 | 1 | 2 | 3 | 26. | I play games that involve matches/fire.  | 0 | 1 | 2 | 3 | 44. | I know about fire/fire materials.  |
| 0 | 1 | 2 | 3 | 27. | I like to stare at fire.   | 0 | 1 | 2 | 3 | 45. | I daydream about fire.   |
| 0 | 1 | 2 | 3 | 28. | I feel calm and relaxed when watching fire.  | 0 | 1 | 2 | 3 | 46. | I am curious about fire.   |
| 0 | 1 | 2 | 3 | 29. | Watching fire is soothing.   | 0 | 1 | 2 | 3 | 47. | I think fire can do magical things.  |
| 0 | 1 | 2 | 3 | 30. | I feel very excited when watching fire.  | 0 | 1 | 2 | 3 | 48. | I always watch TV programs/movies that have fire/explosions when they are on.                |
| 0 | 1 | 2 | 3 | 31. | I like helping adults with fire.   | 0 | 1 | 2 | 3 | 49. | I collect pictures/videos of fire/explosions.  |
| 0 | 1 | 2 | 3 | 32. | I get very excited when helping with fire.   | 0 | 1 | 2 | 3 | 50. | I am more interested in fire than are other kids my age.                                     |
| 0 | 1 | 2 | 3 | 33. | I like to help put out fire.   | 0 | 1 | 2 | 3 | 51. | My parent(s) watch me when I am using matches or a lighter.                                  |
| 0 | 1 | 2 | 3 | 34. | I am afraid of fire.   | 0 | 1 | 2 | 3 | 52. | My parent(s) watch me when I am lighting a fire (like the fireplace, campfire, or barbecue). |
| 0 | 1 | 2 | 3 | 35. | I think fire is magic.   | 0 | 1 | 2 | 3 | 53. | I can get matches/lighter at home.   |
| 0 | 1 | 2 | 3 | 36. | Used firesetting materials (e.g., spent matches, empty match boxes) have been found within the home. | 0 | 1 | 2 | 3 | 54. | I can get combustible/flammable materials at home.   |
| 0 | 1 | 2 | 3 | 37. | I have burned or singed items inside my home.  |   |   |   |   |     |  |
| 0 | 1 | 2 | 3 | 38. | I have taken matches/lighter from my home.   |   |   |   |   |     |  |
| 0 | 1 | 2 | 3 | 39. | I carry matches/lighter.   |   |   |   |   |     |  |
| 0 | 1 | 2 | 3 | 40. | I still play with matches/lighter despite being punished for this.                                   |   |   |   |   |     |  |

- In the LAST 12 MONTHS, how often did you carry matches or lighters in your pockets, purse or bag?

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Often
- ☐ Always

- How old were you the first time you played with matches or lighters?

- ☐ Never played with matches or lighters
- ☐ 5 years old or younger
- ☐ Between 6 and 9 years old
- ☐ 10 years old or older

- How old were you the first time you burned something that you weren't supposed to?

- ☐ Never burned something that I wasn't supposed to
- ☐ 5 years old or younger
- ☐ Between 6 and 9 years old
- ☐ 10 years old or older

- In the LAST 12 MONTHS, how many times have you set something on fire that you weren't supposed to?

\_\_\_\_\_ times (Write '0' if you have not done this.)

**DIRECTIONS:** People differ in the ways they act and think in different situations. This is a test to measure some of the ways in which you act and think. Read each statement and put an X on the appropriate circle on the right side of this page. Do not spend too much time on any statement. Answer quickly and honestly.

	<input type="radio"/> Rarely/Never	<input type="radio"/> Occasionally	<input type="radio"/> Often	<input type="radio"/> Almost Always/Always
1 I plan what I have to do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2 I do things without thinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3 I make-up my mind quickly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4 I am happy-go-lucky.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5 I do not “pay attention.”	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6 My thoughts are racing too fast.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7 I plan my spare time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8 I am self controlled.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9 I concentrate easily.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10 I am a “saver”.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11 I cannot stand still at movies or school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12 I like to think carefully about things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13 I plan for my future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14 I say things without thinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15 I like to think about complex problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16 I change my mind about what I will do when I grow up.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17 I act “on impulse.”	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18 I get easily bored when solving thought problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19 I act on the spur of the moment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20 I am a great thinker.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21 I change friends.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22 I buy things on impulse.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23 I can only think about one problem at a time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24 I change hobbies and sports.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25 I spend more than I should.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26 When I think about something, other thoughts pop up in my mind.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27 I am more interested in the present than the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28 I am restless at the movies or lectures.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29 I like to play chess or checkers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30 I am future oriented.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The following are characteristics that may or may not apply to you. Please tick one answer for each statement to indicate how much you agree or disagree with each statement. Please answer as honestly as you can.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. My friend's emotions don't affect me much.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. After being with a friend who is sad about something, I usually feel sad.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I can understand my friend's happiness when she/he does well at something.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I get frightened when I watch characters in a good scary movie.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I get caught up in other people's feelings easily.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I find it hard to know when my friends are frightened.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I don't become sad when I see other people crying.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Other people's feelings don't bother me at all.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. When someone is feeling 'down' I can usually understand how they feel.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I can usually work out when my friends are scared.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. I often become sad when watching sad things on TV or in films.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
12. I can often understand how people are feeling even before they tell me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Seeing a person who has been angered has no effect on my feelings.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. I can usually work out when people are cheerful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. I tend to feel scared when I am with friends who are afraid.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. I can usually realise quickly when a friend is angry.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. I often get swept up in my friend's feelings.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. My friend's unhappiness doesn't make me feel anything.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. I am not usually aware of my friend's feelings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. I have trouble figuring out when my friends are happy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

# ICU (Youth Version)

Name: \_\_\_\_\_

Date Completed: \_\_\_\_\_

***Instructions:** Please read each statement and decide how well it describes you. Mark your answer by circling the appropriate number (0-3) for each statement. Do not leave any statement unrated.*

	Not at all true	Somewhat true	Very true	Definitely True
1. I express my feelings openly.	0	1	2	3
2. What I think is “right” and “wrong” is different from what other people think.	0	1	2	3
3. I care about how well I do at school or work.	0	1	2	3
4. I do not care who I hurt to get what I want.	0	1	2	3
5. I feel bad or guilty when I do something wrong.	0	1	2	3
6. I do not show my emotions to others.	0	1	2	3
7. I do not care about being on time.	0	1	2	3
8. I am concerned about the feelings of others.	0	1	2	3
9. I do not care if I get into trouble.	0	1	2	3
10. I do not let my feelings control me.	0	1	2	3
11. I do not care about doing things well.	0	1	2	3
12. I seem very cold and uncaring to others.	0	1	2	3
13. I easily admit to being wrong.	0	1	2	3
14. It is easy for others to tell how I am feeling.	0	1	2	3
15. I always try my best.	0	1	2	3
16. I apologize (“say I am sorry”) to persons I hurt.	0	1	2	3
17. I try not to hurt others’ feelings.	0	1	2	3
18. I do not feel remorseful when I do something wrong.	0	1	2	3
19. I am very expressive and emotional.	0	1	2	3
20. I do not like to put the time into doing things well.	0	1	2	3



21. The feelings of others are unimportant to me.	0	1	2	3
22. I hide my feelings from others.	0	1	2	3
23. I work hard on everything I do.	0	1	2	3
24. I do things to make others feel good.	0	1	2	3

Unpublished rating scale by Paul J. Frick, Department of Psychology, University of New Orleans (pfrick@uno.edu) .

## "Research project about fire setting in young people"

### Information sheet for you to keep!

Hello, my name is Doreen and I want to know more about fire setting in young people. I am doing this as part of my course work at King's College London, where I study to be a psychologist. Please have a look at this leaflet and ask me if you have any questions.

Thank you for reading this.

What is the study about?

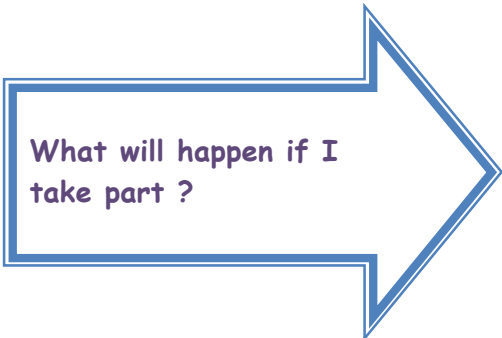
In this study, we are trying to understand how young people who have set fires before think and feel. We want to do this because we think it will help us to understand fire setting better, and perhaps find ways to make the education and treatment programmes for fire setters better, in the future.

We are calling this project "Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy."

Why have I been asked to take part?

We have decided to ask you because your file says that you have set fire in the past. You can say no if you would prefer not to take part, that's ok.

We are also asking other people to take part, some who have set fires and some who have not - so you are not the only one we will ask to take part! When we have asked enough people, we want to see if there are differences between all the people who took part.



What will happen if I take part ?

If you agree to take part, I will first read some files about you, and also speak to your team/staff about you. This is to make sure you are feeling well enough to take part, and so I know a little bit about you, and don't ask you questions that other people have asked you many times before.

I will then ask you to read a list of words first. Then I will give you a task on a computer, and then I will ask you some questions, using short, easy questionnaires.

It will take place at.....

**It will take no more than 1 hour (with breaks!)**

If you agree, I will keep your answers but not your name - no one will know who you are!

**This is important:** Some of the things we will talk about during this research might be uncomfortable or distressing for you. You do not need to answer any questions you don't want to. **If at any time you are uncomfortable or stressed about what you need to do, we will take a break straightaway. After that you can choose if you would like to continue or not. We will also let your care team or case workers or referrer know that you are feeling distressed.**



Can I stop even after I said I want to take part ?

You can stop and say that you don't want to take part anymore at any time, without saying why.

You can also change your mind afterwards, and tell me if you don't want your answers to be included in the study anymore. You can tell me up until 30<sup>th</sup> June 2013. You don't have to say why.



Will the things I tell you be kept secret?

**This is very important:** No one will know who you are, **but** if you tell me something about you or another child being at risk of serious harm, then I may need to tell somebody else to keep you safe. **Also**, if you tell me that you have done something illegal that you have not told anybody else before, then I need to tell somebody else, because your parents/guardians, or the police may need to know about it.

When the study is finished, I will write a report and share it with other researchers. Again, I will not tell them the names of anybody who took part. I will also send a copy of the report to ....., so that your care team or case workers or referrer can send them to you if you want to.

If you would like to take part, then we will also need to ask your parents for their consent (to ask if they agree that you can take part).

We will give you a £10 shop voucher, as a thank you for taking part.

**Please feel free to contact me with any questions**

**(until 30 June 2013, which is the last day on which you can decide that you want your answers to be taken out of our research project):**

Doreen Hoerold

Telephone: 075 3584 1276 or 020 7848 0733

Email: doreen.hoerold@kcl.ac.uk

If this study has harmed you in any way, you can contact my supervisor at King's College London using the details below, for further advice and information:

Dr Troy Tranah (Telephone: 020 7848 0501; Email: troy.tranah@kcl.ac.uk)

**Please note: I will contact you in approximately one week from now to ask if you would like to take part in this research study.**

**You may say yes or no, without giving any further reason.**

This research has been reviewed and approved by the Psychiatry, Nursing and Midwifery (PNM) Research Ethics Subcommittee (RESC) (Reference: PNM 1112 93).

**CONSENT FORM**

**Research Project on fire setting in young people**

**("Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy")**

*If you wish to take part in our study, please read this, and then tick the boxes below.*

This is to confirm that I am happy to take part in the above research. The researcher has explained to me why the study is taking place, what I will be asked to do and how long this will take. I have read the information sheet.

I am aware that the study involves reading words, and filling out some questionnaires. I also understand that I will be asked to take part in a computer task. This involves looking at some simple words, and colours.

I understand that I am free to leave the research study at any time until 30 June 2013, without saying why. I understand that the researchers will keep my answers, but not my name, so that nobody will know what I said, except if I tell the researcher that I or somebody else is at risk of quite serious harm, or if I tell the researcher that I have done something illegal in the past that I have not told anybody else before.

1. I am ticking this box because I have read and understand the information and consent form and have been allowed to ask any questions I had. ☐
2. I understand that I don't have to take part if I don't want to. I can change my mind about taking part at any time until 30 June 2013, without giving any reason. Saying no or changing my mind will not change anything for me at \_\_\_\_\_ ☐
3. I agree that the researcher (Doreen Hoerold) may read my case file at \_\_\_\_\_ ☐
4. I agree that the researcher (Doreen Hoerold) will inform my care team or referrer, if I become upset, or if I tell the researcher that I or somebody else is at risk of quite serious harm, or that I have done something illegal in the past that I have not told anybody else before. ☐
5. I agree to take part in the above study. ☐

\_\_\_\_\_  
Name of Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of Researcher

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

## Information Sheet:

### Research project on fire setting in young people

I would like to invite you to take part in a research study, which we have called “Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy”. We are studying how young people who set fire think and feel, for example:

- how interested they are in fires
- how they concentrate on information about fire
- how quickly they act and react in everyday life
- how they think and feel about other people's feelings

Before you decide whether to take part in this study, please take time to read the following information carefully. Please ask if there is anything that is not clear to you or if you would like more information.

#### Why is the study being done?

We want to find out some things about young people who often deliberately set fires, so that we can develop better prevention and treatment programmes. At the moment, we do not have a lot of knowledge about what makes young people set fires. We also do not know how they think and feel about fire, how they process other people's feelings, and how well they are able to stop themselves from getting involved with fire and fire setting.

An important aim of this study is to try to improve a method which has been used before, using a short computer task in which young people are asked to concentrate on different information, and press a button as quickly as possible. We want to know if this method computer task is useful for studying concentration on fire information. This could help us develop prevention and treatment programmes for young people who deliberately set fires.

#### Why have I been invited to take part?

You have been invited to participate in this study because you are a young person with a history of fire setting. We will also ask young people who may have committed an offense but do not set fires. We want to compare the results between all participants who take part in this study.

You can say no if you would prefer not to take part, that's ok.



### **Do I have to take part?**

It is completely up to you whether you take part in the study or not. If you decide to take part, you can change your mind at any time and leave the study without giving a reason, until 30 June 2013. Refusal to take part in this study will not in any way affect your treatment within the criminal justice system, or make any difference for the standard of any care or service you receive. If you have any questions about this project, please ask the researcher before you decide whether to take part. If you are under 16 years of age, we also need to ask your parents for their consent.

### **What do I have to do if I agree to take part?**

If you decide to take part, you will be asked to sign a consent form. Signing the consent form shows that you understand the study and are willing to take part. You will then be asked to read some words out, and the researcher will complete some questionnaires with you, about yourself. After that, you will be asked to complete one task on a computer, which will show you some words and colours, and you will be asked to press a button as fast as possible. The questionnaires and task are not a test; there are no right or wrong answers. Taking part will take about 60 minutes in total to complete.

**This is important:** Some of the things we will talk about during this research might be uncomfortable or distressing for you. You do not need to answer any questions you don't want to. **If at any time you are uncomfortable or stressed about what you need to do, we will take a break straightaway. After that you can choose if you would like to continue or not. We will also let your care team/case workers/referrer know that you are feeling distressed.**

### **What are the possible benefits from the research?**

There is no direct benefit to you from taking part in this study. However, we hope that the results of our study will help us understand more about young people who set fires. They may help us to improve prevention and treatment programmes for fire setting. You will receive a voucher to the value of £10 as reimbursement for taking part.

### **Will my taking part in this study be kept confidential?**

Any information you provide will be kept private and will not be shown to anybody apart from the researchers. **There are only two exceptions to this rule: No one will know who you are, but if you tell me something that indicates that you, or another person, are at risk of quite serious harm then I may need to tell somebody else to keep you safe. Also, if you tell me that you have done something illegal in the past that you have not told anybody else before, then I need to tell somebody else, because your parents/guardians, or the police may need to know about it.**

Your answers will be stored **without your name on it**, on a secure computer or in a locked cabinet at the Institute of Psychiatry, King's College London.

### **What will happen to the results of the research study?**

The results of the study will be written up in a thesis as part of a doctorate course in Clinical Psychology, at King's College London, where I train as a psychologist. The results will also be sent to psychology research journals for publication, so that they can be shared with other researchers. No personal information will be identified in any publication of the results. The final results of the study will also be sent to \_\_\_\_\_, so that your care team/case workers/referrer can send them to you if you want to.

**Who has reviewed the study?**

This research has been reviewed and approved by the Psychiatry, Nursing and Midwifery (PNM) Research Ethics Subcommittee (RESC) (Reference: PNM 11/12-93).

**Who can I contact for further information?**

If you have any further questions please feel free to call or email me at any time - until 30 June 2013, which is the last day on which you can change your mind about taking part, and choose to have your information and your responses removed from our research.

**Contact information:** Doreen Hoerold, Trainee Clinical Psychologist

**Tel:** 075 3584 1276 or 020 7848 0733

**Email:** doreen.hoerold@kcl.ac.uk

**Address:** Department of Clinical Psychology,  
Institute of Psychiatry,  
3<sup>rd</sup> Floor, ASB Building  
4 Windsor Walk,  
London, SE5 8A

If this study has harmed you in any way, you can contact my supervisor at King's College London using the details below, for further advice and information:

Dr Troy Tranah (Telephone: 020 7848 0501; Email: troy.tranah@kcl.ac.uk)

**Please note: I will contact you in approximately one week from now to invite you to take part in this research study. You may decline or accept, without giving any further reason.**



**CONSENT FORM**

**Research Project on fire setting in young people**

**("Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy")**

*If you wish to take part in the above study, please read and complete the section below.*

This is to confirm that I freely consent to take part in the above research. The researcher has explained to me why the study is taking place, what I will be asked to do and how long this will take. I have read the information section and understand the nature of the study. I understand that the study is purely a research project, and I do not expect to gain any personal benefit from taking part.

I am aware that the study involves reading words and completing some questionnaires about myself. I also understand that I will be asked to take part in a computer task. This involves looking at some simple words, pictures and colours.

I understand that I am free to leave the research study at any time, until 30 June 2013, without giving a reason. I also understand that if I refuse to take part in the above study, this will not in any way affect me legally, at school or any care I receive. I understand that the information I give is strictly confidential and will not be made publicly available, except if I tell the researcher that I or somebody else is at risk of quite serious harm, or if I tell the researcher that I have done something illegal in the past that I have not told anybody else before. Information collected is for research purposes and will not be identifiable as their own.

***Please tick the box***

1. I confirm that I have read and understand the information and consent form and have had the opportunity to ask questions. ☐
2. I understand that I don't have to take part if I don't want to. I can change my mind about taking part at any time until 30 June 2013, without giving any reason. Saying no or changing my mind will not affect my care or services at \_\_\_\_\_. ☐
3. I agree that the researcher (Doreen Hoerold) may read my case file at \_\_\_\_\_ . ☐
4. I agree that the researcher (Doreen Hoerold) will inform my care team or referrer if I become upset, or if I tell the researcher that I or somebody else is at risk of quite serious harm, or that I have done something illegal in the past that I have not told anybody else before. ☐
5. I agree to take part in the above study. ☐

\_\_\_\_\_  
Name of Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of Researcher

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

**Research project: Fire setting in young people**

I would like to invite your child to take part in a research study, which we have called “Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy”. We are studying how young people who set fire think and feel, for example:

- how interested they are in fires
- how they concentrate on information about fire
- how quickly they act and react in everyday life
- how they think and feel about other people's feelings

Before you decide whether you would like your child to take part in this study, please take time to read the following information carefully. Please ask if there is anything that is not clear to you or if you would like more information.

**Why is the study being done?**

We want to find out some things about young people who often deliberately set fires, so that we can develop better prevention and treatment programmes. At the moment, we do not have a lot of knowledge about what makes young people set fires. We also do not know how they think and feel about fire, how they process other people's feelings, and how well they are able to stop themselves from getting involved with fire and fire setting.

An important aim of this study is to try to improve a method which has been used before, using a short computer task in which young people are asked to concentrate on different information, and press a button as quickly as possible. We want to know if this method computer task is useful for studying concentration on fire information. This could help us develop prevention and treatment programmes for young people who deliberately set fires.

**Why has my child been invited to take part?**

We have presented our plan for this research to the staff at \_\_\_\_\_. Your child has been invited to participate in this study because s/he is a young person who has set fires in the past.

**Does my child have to take part?**

Participation is completely voluntary. If you agree for him/her to take part, we will then ask your child whether s/he is happy to participate. You can change your mind at any time until 30 June 2013, and your child will be able to leave the study without giving a reason. Refusal to take part in this study will not in any way affect your child's treatment at \_\_\_\_\_, or affect the standard of any care or service s/he receives. If you have any questions about this project, please ask the researcher before you make your decision.

**What does my child have to do if I agree for him/her to take part?**

We will contact you in one week to find out whether you are happy for your child to take part in the study. After that, we will ask your child again whether s/he is happy to participate. Your child will then be asked to read some thing out, and complete some questionnaires with the researcher about him/herself. After that, s/he will be asked to complete one task on a computer, which will show some words and colours, and s/he will be asked to press a button as quickly as possible. The questionnaires and computer task are not a test; there are no right or wrong answers. Taking part will take about 60 minutes in total to complete. It will take place at \_\_\_\_\_.

**Important:** Some topics we will discuss during this research may be distressing. If at any point during the session any participant becomes distressed or experiences discomfort, we will offer a break, ask your child if s/he would like to continue or not, and we will also let your child's care team or case workers or referrer know.

**What are the possible benefits from the research?**

There is no direct benefit to your child from taking part in this study. However, we hope that the results of our study will help us understand more about young people who set fires. This can help us to improve prevention and treatment programmes for fire setting. Your child will receive a voucher to the value of £10 as reimbursement for taking part.

**Will personal information from this study be kept confidential?**

Any information you provide will be kept private and will not be shown to anybody apart from the researchers. There are some exceptions to confidentiality, however: If your child tells me something that indicates that s/he, or another person, are at risk of quite serious harm, then I need to inform his/her care team and the relevant authorities to keep him/her safe. Also, if s/he tells me that s/he has done something illegal in the past that s/he have not told anybody else before, then I need to tell somebody else, because you, and/or the police may need to know about it. All data will be stored **without your child's name on it**, on a secure computer or in a locked cabinet at the Institute of Psychiatry, King's College London.

**What will happen to the results of the research study?**

The results of the study will be written up in a thesis as part of a Doctorate in Clinical Psychology at King's College London. The results will also be sent to academic psychology journals for publication. No personal information will be identified in any publication of the results. The final results of the study will be sent to your child's care team at \_\_\_\_\_, who can send them on to you if you wish.

**Who has reviewed the study?**

King's College London Psychiatry, Nursing and Midwifery (PNM) Research Ethics Subcommittee (RESC) (Reference PNM/11/12-93).

**Contact for further information?**

If you have any further questions please feel free to call or email me at any time - until 30 June 2013, which is the last day on which participants or parents can change their mind about taking part, and choose to have their information and responses removed from the research.

**Contact information:** Doreen Hoerold, Trainee Clinical Psychologist

**Tel:** 075 3584 1276 or 020 7848 0733

**Email:** doreen.hoerold@kcl.ac.uk

**Address:** Department of Clinical Psychology,  
Institute of Psychiatry,  
3<sup>rd</sup> Floor, Addiction Sciences Building  
4 Windsor Walk,  
London, SE5 8AF

If this study has harmed your child in any way, you can contact my supervisor at King's College London using the details below, for further advice and information:

Dr Troy Tranah (Telephone: 020 7848 0501; Email: troy.tranah@kcl.ac.uk)

**Please note: I will contact you in approximately one week from now to invite your child to take part in this research study. You may decline or accept, without giving any further reason.**

**CONSENT FORM FOR PARENTS/GUARDIANS**

**Research Project on fire setting in young people**

**("Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy")**

*If you wish your son/daughter to take part in the above study, listen carefully and indicate your consent.*

This is to confirm that I freely consent for my son/daughter to take part in the above research. The researcher has explained to me why the study is taking place, what my child will be asked to do and how long this will take. I have read the information section and understand the nature of the study. I understand that the study is purely a research project, and I do not expect my child to gain any personal benefit from taking part.

I am aware that the study involves reading some words, and completing some questionnaires about. I also understand he/she will be asked to take part in a computer task. This involves looking at some simple words and colours.

I understand that my child is free to leave the research study at any time until 30 June 2012, without giving a reason. I also understand that if I refuse to allow my child to take part in the above study, this will not in any way affect him/her at school. I understand that the information he/she gives is strictly confidential and will not be made publicly available, except where the participant has disclosed that s/he or others are at risk of serious harm, or a previously undisclosed offence is disclosed during the study. Information collected is for research purposes and will not be identifiable as their own.

***Please indicate "YES" or "NO"***

I confirm that I have read and understand the information and have read the consent form and have had the opportunity to ask questions.

YES / NO

I understand that my child's participation is voluntary and that he/she is free to withdraw at any time until 30 June 2013, without giving any reason, without their legal rights, medical care or school being affected.

YES / NO

I understand that my child's care team or referrer will be informed if my child becomes distressed, discloses any information about him/herself being at risk for serious harm, or discloses information about an offence currently under investigation which has not been disclosed before.

YES / NO

I agree that \_\_\_\_\_, my son/daughter, may take part in the above study.

YES / NO

\_\_\_\_\_  
Name of Parent/Guardian

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of Researcher

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

## "Research project about fire setting in young people"

### Information sheet for you to keep!

Hello, my name is Doreen and I want to know more about fire setting in young people. I am doing this as part of my course work at King's College London, where I study to be a psychologist. Please have a look at this leaflet and ask me if you have any questions.

Thank you for reading this.

What is the study about?

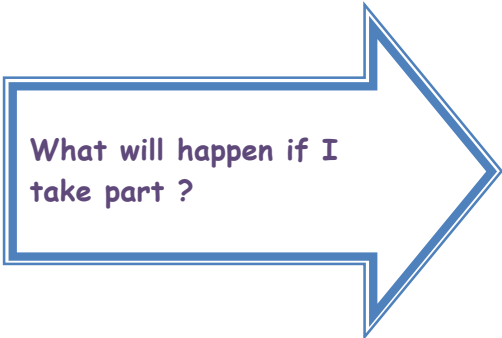
In this study, we are trying to understand how young people who have set fires before think and feel. We want to do this because we think it will help us to understand fire setting better, and perhaps find ways to make the education and treatment programmes for fire setters better, in the future.

We are calling this project "Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy."

Why have I been asked to take part?

For this study, we ask young people who set fires, and also young people who don't set fires, to take part. We have decided to ask you because we are looking for young people who do not set fires. You can say no if you would prefer not to take part, that's ok.

We are also asking other people to take part, some who have set fires and some who have not - so you are not the only one we will ask to take part! When we have asked enough people, we want to see if there are differences between all the people who took part.



What will happen if I take part ?

If you agree to take part, I will first read some files about you, and also speak to your team/staff about you. This is to make sure you are feeling well enough to take part, and so I know a little bit about you, and don't ask you questions that other people have asked you many times before.

I will then ask you to read a list of words first. Then I will give you a task on a computer, and then I will ask you some questions, using short, easy questionnaires.

It will take place at.....

**It will take no more than 1 hour (with breaks!)**

If you agree, I will keep your answers but not your name - no one will know who you are!

**This is important:** Some of the things we will talk about during this research might be uncomfortable or distressing for you. You do not need to answer any questions you don't want to. **If at any time you are uncomfortable or stressed about what you need to do, we will take a break straightaway. After that you can choose if you would like to continue or not. We will also let your care team or case workers know that you are feeling distressed.**



Can I stop even after I said I want to take part ?

You can stop and say that you don't want to take part anymore at any time, without saying why.

You can also change your mind afterwards, and tell me if you don't want your answers to be included in the study anymore. You can tell me up until 30<sup>th</sup> June 2013. You don't have to say why.



Will the things I tell you be kept secret?

**This is very important:** No one will know who you are, but if you tell me something about you or another child being at risk of serious harm, then I may need to tell somebody else to keep you safe. **Also**, if you tell me that you have done something illegal that you have not told anybody else before, then I need to tell somebody else, because your parents/guardians, or the police may need to know about it.



When the study is finished, I will write a report and share it with other researchers. Again, I will not tell them the names of anybody who took part. I will also send a copy of the report to ....., so that your care team or case workers can send them to you if you want to.

If you would like to take part, then we will also need to ask your parents for their consent (to ask if they agree that you can take part).

We will give you a £10 shop voucher, as a thank you for taking part.

**Please feel free to contact me with any questions**

**(until 30 June 2013, which is the last day on which you can decide that you want your answers to be taken out of our research project):**

Doreen Hoerold

Telephone: 075 3584 1276 or 020 7848 0733

Email: doreen.hoerold@kcl.ac.uk

If this study has harmed you in any way, you can contact my supervisor at King's College London using the details below, for further advice and information:

Dr Troy Tranah (Telephone: 020 7848 0501; Email: troy.tranah@kcl.ac.uk)

**Please note: I will contact you in approximately one week from now to ask if you would like to take part in this research study. You may say yes or no, without giving any further reason.**

This research has been reviewed and approved by the Psychiatry, Nursing and Midwifery (PNM) Research Ethics Subcommittee (RESC) (Reference: PNM 11/12-93).

CONSENT FORM

**Research Project on fire setting in young people**

**("Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy")**

*If you wish to take part in our study, please read this, and then tick the boxes below.*

This is to confirm that I am happy to take part in the above research. The researcher has explained to me why the study is taking place, what I will be asked to do and how long this will take. I have read the information sheet.

I am aware that the study involves reading words, and filling out some questionnaires. I also understand that I will be asked to take part in a computer task. This involves looking at some simple words, and colours.

I understand that I am free to leave the research study at any time until 30 June 2013, without saying why. I understand that the researchers will keep my answers, but not my name, so that nobody will know what I said, except if I tell the researcher that I or somebody else is at risk of quite serious harm, or if I tell the researcher that I have done something illegal in the past that I have not told anybody else before.

1. I am ticking this box because I have read and understand the information and consent form and have been allowed to ask any questions I had. ☐
2. I understand that I don't have to take part if I don't want to. I can change my mind about taking part at any time until 30 June 2013, without giving any reason. Saying no or changing my mind will not change anything for me at school. ☐
3. I agree that the researcher (Doreen Hoerold) will inform my teachers if I become upset, or if I tell the researcher that I or somebody else is at risk of quite serious harm, or that I have done something illegal in the past that I have not told anybody else before. ☐
4. I agree to take part in the above study. ☐

\_\_\_\_\_  
Name of Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of Researcher

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature



## Information Sheet:

### Research project on fire setting in young people

I would like to invite you to take part in a research study, which we have called "Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy". We are studying how young people who set fire think and feel, for example:

- how interested they are in fires
- how they concentrate on information about fire
- how quickly they act and react in everyday life
- how they think and feel about other people's feelings

As part of this project, I am also asking young people who do not set fires the same questions, so that I can compare the answers. Before you decide whether to take part in this study, please take time to read the following information carefully. Please ask if there is anything that is not clear to you or if you would like more information.

#### Why is the study being done?

We want to find out some things about young people who often deliberately set fires, so that we can develop better prevention and treatment programmes. At the moment, we do not have a lot of knowledge about what makes young people set fires. We also do not know how they think and feel about fire, how they process other people's feelings, and how well they are able to stop themselves from getting involved with fire and fire setting.

An important aim of this study is to try to improve a method which has been used before, using a short computer task in which young people are asked to concentrate on different information, and press a button as quickly as possible. We want to know if this method computer task is useful for studying concentration on fire information. This could help us develop prevention and treatment programmes for young people who deliberately set fires.

#### Why have I been invited to take part?

To complete this study, we ask young people who set fires, and also young people who don't set fires, to take part. We have decided to ask you because we are looking for young people who may have committed a criminal offense, but do not set fires. We want to compare the results between all participants who take part in this study.

You can say no if you would prefer not to take part, that's ok.

### **Do I have to take part?**

It is completely up to you whether you take part in the study or not. If you decide to take part, you can change your mind at any time and leave the study without giving a reason, until 30 June 2013. Refusal to take part in this study will not in any way make any difference for the standard of any care or service you receive. If you have any questions about this project, please ask the researcher before you decide whether to take part.

If you are under 16 years of age, we also need to ask your parents for their consent.

### **What do I have to do if I agree to take part?**

If you decide to take part, you will be asked to sign a consent form. Signing the consent form shows that you understand the study and are willing to take part. I will then access your case files at \_\_\_\_\_, to make sure you meet the criteria to take part in this study. You will then be asked to read some words out, and the researcher will complete some questionnaires with you, about yourself. After that, you will be asked to complete one task on a computer, which will show you some words and colours, and you will be asked to press a button as fast as possible. The questionnaires and the computer task are not a test; there are no right or wrong answers. Taking part will take about 60 minutes in total to complete.

**This is important:** Some of the things we will talk about during this research might be uncomfortable or distressing for you. You do not need to answer any questions you don't want to. **If at any time you are uncomfortable or stressed about what you need to do, we will take a break straightaway. After that you can choose if you would like to continue or not. We will also let your care team/case workers know that you are feeling distressed.**

### **What are the possible benefits from the research?**

There is no direct benefit to you from taking part in this study. However, we hope that the results of our study will help us understand more about young people who set fires. They may help us to improve prevention and treatment programmes for fire setting. You will receive a voucher to the value of £10 as reimbursement for taking part.

### **Will my taking part in this study be kept confidential?**

Any information you provide will be kept private and will not be shown to anybody apart from the researchers. **There are only two exceptions to this rule: No one will know who you are, but if you tell me something that indicates that you, or another person, are at risk of quite serious harm then I may need to tell somebody else to keep you safe. Also, if you tell me that you have done something illegal in the past that you have not told anybody else before, then I need to tell somebody else, because your parents/guardians, or the police may need to know about it.**

Your answers will be stored **without your name on it**, on a secure computer or in a locked cabinet at the Institute of Psychiatry, King's College London.

### **What will happen to the results of the research study?**

The results of the study will be written up in a thesis as part of a doctorate course in Clinical Psychology at King's College London, where I train as a psychologist. The results will also be sent to academic psychology journals for publication, so that they can be shared with other researchers. No personal information will be identified in any publication of the results. The final results of the study will also be sent to \_\_\_\_\_, so that your care team/case workers can send them to you if you want to.

**Who has reviewed the study?**

This research has been reviewed and approved by the Psychiatry, Nursing and Midwifery (PNM) Research Ethics Subcommittee (RESC) (Reference: PNM 11/12-93).

**Who can I contact for further information?**

If you have any further questions please feel free to call or email me at any time - until 30 June 2013, which is the last day on which you can change your mind about taking part, and choose to have your information and your responses removed from our research.

**Contact information:** Doreen Hoerold, Trainee Clinical Psychologist

**Tel:** 075 3584 1276 or 020 7848 0733

**Email:** doreen.hoerold@kcl.ac.uk

**Address:** Department of Clinical Psychology,  
Institute of Psychiatry,  
3<sup>rd</sup> Floor, ASB Building  
4 Windsor Walk,  
London, SE5 8A

If this study has harmed you in any way, you can contact my supervisor at King's College London using the details below, for further advice and information:

Dr Troy Tranah (Telephone: 020 7848 0501; Email: troy.tranah@kcl.ac.uk)

**Please note: I will contact you in approximately one week from now to invite you to take part in this research study. You may decline or accept, without giving any further reason.**

**CONSENT FORM**

**Research Project on fire setting in young people**

**("Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy")**

*If you wish to take part in the above study, please read and complete the section below.*

This is to confirm that I freely consent to take part in the above research. The researcher has explained to me why the study is taking place, what I will be asked to do and how long this will take. I have read the information section and understand the nature of the study. I understand that the study is purely a research project, and I do not expect to gain any personal benefit from taking part.

I am aware that the study involves reading words and completing some questionnaires about myself. I also understand that I will be asked to take part in a computer task. This involves looking at some simple words, pictures and colours.

I understand that I am free to leave the research study at any time, until 30 June 2013, without giving a reason. I also understand that if I refuse to take part in the above study, this will not in any way affect me legally, at school or any care I receive. I understand that the information I give is strictly confidential and will not be made publicly available, except if I tell the researcher that I or somebody else is at risk of quite serious harm, or if I tell the researcher that I have done something illegal in the past that I have not told anybody else before. Information collected is for research purposes and will not be identifiable as their own.

***Please tick the box***

1. I confirm that I have read and understand the information and consent form and have had the opportunity to ask questions. ☐
2. I understand that I don't have to take part if I don't want to. I can change my mind about taking part at any time until 30 June 2013, without giving any reason. Saying no or changing my mind will not affect my care or services at \_\_\_\_\_. ☐
3. I agree that the researcher (Doreen Hoerold) may read my case file at \_\_\_\_\_ . ☐
4. I agree that the researcher (Doreen Hoerold) will inform my care team if I become upset, or if I tell the researcher that I or somebody else is at risk of quite serious harm, or that I have done something illegal in the past that I have not told anybody else before. ☐
5. I agree to take part in the above study. ☐

\_\_\_\_\_  
Name of Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of Researcher

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

**Research project: Fire setting in young people**

I would like to invite your child to take part in a research study, which we have called "Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy". We are studying how young people who set fire think and feel, for example:

- how interested they are in fires
- how they concentrate on information about fire
- how quickly they act and react in everyday life
- how they think and feel about other people's feelings

As part of this project, we are also asking young people who do not set fires the same questions, so that we can compare the answers. Before you decide whether you would like your child to take part in this study, please take time to read the following information carefully. Please ask if there is anything that is not clear to you or if you would like more information.

**Why is the study being done?**

We want to find out some things about young people who often deliberately set fires, so that we can develop better prevention and treatment programmes. At the moment, we do not have a lot of knowledge about what makes young people set fires. We also do not know how they think and feel about fire, how they process other people's feelings, and how well they are able to stop themselves from getting involved with fire and fire setting.

An important aim of this study is to try to improve a method which has been used before, using a short computer task in which young people are asked to concentrate on different information, and press a button as quickly as possible. We want to know if this method computer task is useful for studying concentration on fire information. This could help us develop prevention and treatment programmes for young people who deliberately set fires.

**Why has my child been invited to take part?**

We have presented our plan for this research to the staff at \_\_\_\_\_. To complete this study, we ask young people who set fires, and also young people who don't set fires, to take part. We have decided to ask your child we are looking for young people who may have committed a criminal offense, but do not set fires. We want to compare the results between all participants who take part in this study.

**Does my child have to take part?**

Participation is completely voluntary. If you agree for him/her to take part, we will then ask your child whether s/he is happy to participate. You can change your mind at any time until 30 June 2013, and your child will be able to leave the study without giving a reason. Refusal to take part in this study will not in any way affect your child's treatment at \_\_\_\_\_, or affect the standard of any care or service s/he receives. If you have any questions about this project, please ask the researcher before you make your decision.

**What does my child have to do if I agree for him/her to take part?**

We will contact you in one week to find out whether you are happy for your child to take part in the study. After that, we will ask your child again whether s/he is happy to participate. After that, we will access your child's case file, to make sure s/he meets inclusion criteria for our study. Your child will then be asked to read some thing out, and complete some questionnaires with the researcher about him/herself. After that, s/he will be asked to complete one task on a computer, which will show some words and colours, and s/he will be asked to press a button as quickly as possible. The questionnaires and computer task are not a test; there are no right or wrong answers. Taking part will take about 60 minutes in total to complete. It will take place at \_\_\_\_\_.

**Important:** Some topics we will discuss during this research may be distressing. If at any point during the session any participant becomes distressed or experiences discomfort, we will offer a break, ask your child if s/he would like to continue or not, and we will also let your child's care team or case workers know.

**What are the possible benefits from the research?**

There is no direct benefit to your child from taking part in this study. However, we hope that the results of our study will help us understand more about young people who set fires. This can help us to improve prevention and treatment programmes for fire setting. Your child will receive a voucher to the value of £10 as reimbursement for taking part.

**Will personal information from this study be kept confidential?**

Any information your child provides will be kept private and will not be shown to anybody apart from the researchers. There are some exceptions to confidentiality, however: If your child tells me something that indicates that s/he, or another person, are at risk of quite serious harm, then I need to inform his/her care team and the relevant authorities to keep him/her safe. Also, if s/he tells me that s/he has done something illegal in the past that s/he have not told anybody else before, then I need to tell somebody else, because you, and/or the police may need to know about it. All data will be stored **without your child's name on it**, on a secure computer or in a locked cabinet at the Institute of Psychiatry, King's College London.

**What will happen to the results of the research study?**

The results of the study will be written up in a thesis as part of a Doctorate in Clinical Psychology at King's College London. The results will also be sent to scientific psychology journals for publication. No personal information will be identified in any publication of the results. The final results of the study will be sent to your child's care team at \_\_\_\_\_, who can send them on to you if you wish.

**Who has reviewed the study?**

This research has been reviewed and approved by the King's College London Psychiatry, Nursing and Midwifery (PNM) Research Ethics Subcommittee (RESC) (Reference PNM/11/12-93).

**Contact for further information?**

If you have any further questions please feel free to call or email me at any time - until 30 June 2013, which is the last day on which participants or parents can change their mind about taking part, and choose to have their information and responses removed from the research.

**Contact information:** Doreen Hoerold, Trainee Clinical Psychologist

**Tel:** 075 3584 1276 or 020 7848 0733

**Email:** doreen.hoerold@kcl.ac.uk

**Address:** Department of Clinical Psychology,  
Institute of Psychiatry,  
3<sup>rd</sup> Floor, Addiction Sciences Building  
4 Windsor Walk,  
London, SE5 8AF

If this study has harmed your child in any way, you can contact my supervisor at King's College London using the details below, for further advice and information:

Dr Troy Tranah (Telephone: 020 7848 0501; Email: troy.tranah@kcl.ac.uk)

**Please note: I will contact you in approximately one week from now to invite your child to take part in this research study. You may decline or accept, without giving any further reason.**



**CONSENT FORM FOR PARENTS/GUARDIANS****Research Project on fire setting in young people****("Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy")**

*If you wish your son/daughter to take part in the above study, listen carefully and indicate your consent.*

This is to confirm that I freely consent for my son/daughter to take part in the above research. The researcher has explained to me why the study is taking place, what my child will be asked to do and how long this will take. I have read the information section and understand the nature of the study. I understand that the study is purely a research project, and I do not expect my child to gain any personal benefit from taking part.

I am aware that the study involves reading some words, and completing some questionnaires about. I also understand he/she will be asked to take part in a computer task. This involves looking at some simple words and colours.

I understand that my child is free to leave the research study at any time until 30 June 2012, without giving a reason. I also understand that if I refuse to allow my child to take part in the above study, this will not in any way affect him/her at school. I understand that the information he/she gives is strictly confidential and will not be made publicly available, except where the participant has disclosed that s/he or others are at risk of serious harm, or a previously undisclosed offence is disclosed during the study. Information collected is for research purposes and will not be identifiable as their own.

***Please indicate "YES" or "NO"***

I confirm that I have read and understand the information and have read the consent form and have had the opportunity to ask questions.

YES / NO

I understand that my child's participation is voluntary and that he/she is free to withdraw at any time until 30 June 2013, without giving any reason, without their legal rights, medical care or school being affected.

YES / NO

I understand that my child's care team will be informed if my child becomes distressed, discloses any information about him/herself being at risk for serious harm, or discloses information about an offence currently under investigation which has not been disclosed before.

YES / NO

I agree that \_\_\_\_\_, my son/daughter, may take part in the above study.

YES / NO

\_\_\_\_\_  
Name of Parent/Guardian\_\_\_\_\_  
Date\_\_\_\_\_  
Signature\_\_\_\_\_  
Name of Researcher\_\_\_\_\_  
Date\_\_\_\_\_  
Signature

## "Research project about fire setting in young people"

### Information sheet for you to keep!

Hello, my name is Doreen and I want to know more about fire setting in young people. I am doing this as part of my course work at King's College London, where I study to be a psychologist. Please have a look at this leaflet and ask me if you have any questions.

Thank you for reading this.

What is the study about?

In this study, we are trying to understand how young people who have set fires before think and feel. We want to do this because we think it will help us to understand fire setting better, and perhaps find ways to make the education and treatment programmes for fire setters better, in the future.

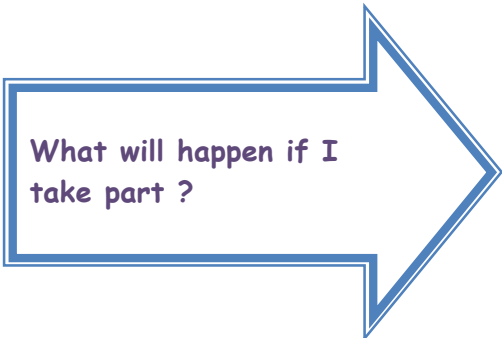
We are calling this project "Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy."

Why have I been asked to take part?

For this study, we ask young people who set fires, and also young people who don't set fires, to take part. When we have asked enough people, we want to see if there are differences between all the people who took part, for example between those who set fires and those who don't set fires.

We have decided to ask you because we are looking for young people who do not set fires. Your school has allowed us to ask some pupils if they would like to take part in our study. You can say no if you would prefer not to take part, that's ok.





What will happen if I take part ?

If you agree to take part, I will ask you to read a list of words first. Then I will give you a task on a computer, and then I will ask you some questions, using short, easy questionnaires. There are no right or wrong answers for any of the questions.

**It will take place at your school.**

**It will take no more than 1 hour (with breaks!)**

**If you agree, I will keep your answers but not your name - no one will know who you are!**

**This is important:** Some of the things we will talk about during this research might be uncomfortable or distressing for you. You do not need to answer any questions you don't want to. **If at any time you are uncomfortable or stressed about what you need to do, we will take a break straightaway. After that you can choose if you would like to continue or not. We will also let your teachers know that you are feeling distressed.**



Can I stop even after I said I want to take part ?

**You can stop and say that you don't want to take part anymore at any time, without saying why.**

**You can also change your mind afterwards, and tell me if you don't want your answers to be included in the study anymore. You can tell me up until 30<sup>th</sup> June 2013. You don't have to say why.**



Will the things I tell you be kept secret?

**This is very important:** No one will know who you are, **but** if you tell me something about you or another child being at risk of serious harm, then I may need to tell somebody else to keep you safe. **Also**, if you tell me that you have done something illegal that you have not told anybody else before, then I need to tell somebody else, because your parents/guardians, or the police may need to know about it.

When the study is finished, I will write a report and share it with other researchers. Again, I will not tell them the names of anybody who took part. I will also send a copy of the report to your school so that your teachers can show them to you if you want.

If you would like to take part, then we will also need to ask your parents for their consent (to ask if they agree that you can take part).

We will give you a £10 shop voucher, as a thank you for taking part.

**Please feel free to contact me with any questions**

**(until 30 June 2013, which is the last day on which you can decide that you want your answers to be taken out of our research project):**

Doreen Hoerold

Telephone: 075 3584 1276 or 020 7848 0733

Email: [doreen.hoerold@kcl.ac.uk](mailto:doreen.hoerold@kcl.ac.uk)

If this study has harmed you in any way, you can contact my supervisor at King's College London using the details below, for further advice and information:

Dr Troy Tranah (Telephone: 020 7848 0501; Email: [troy.tranah@kcl.ac.uk](mailto:troy.tranah@kcl.ac.uk))

**Please remember: You don't need to take part in this study if you don't want to.**

**If you WOULD like to take part, please fill out the form in this letter, and bring it back to your school. After that I can contact you to talk about when we can meet about this project!**

This research has been reviewed and approved by the Psychiatry, Nursing and Midwifery (PNM) Research Ethics Subcommittee (RESC) (Reference: PNM 11/12-93).

**CONSENT FORM**

**Research Project on fire setting in young people**

**("Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy")**

*If you wish to take part in our study, please read this, and then tick the boxes below.*

This is to confirm that I am happy to take part in the above research. The researcher has explained to me why the study is taking place, what I will be asked to do and how long this will take. I have read the information sheet.

I am aware that the study involves reading words, and filling out some questionnaires. I also understand that I will be asked to take part in a computer task. This involves looking at some simple words, and colours.

I understand that I am free to leave the research study at any time until 30 June 2013, without saying why. I understand that the researchers will keep my answers, but not my name, so that nobody will know what I said, except if I tell the researcher that I or somebody else is at risk of quite serious harm, or if I tell the researcher that I have done something illegal in the past that I have not told anybody else before.

1. I am ticking this box because I have read and understand the information and consent form and have been allowed to ask any questions I had. ☐
2. I understand that I don't have to take part if I don't want to. I can change my mind about taking part at any time until 30 June 2013, without giving any reason. Saying no or changing my mind will not change anything for me at school. ☐
3. I agree that the researcher (Doreen Hoerold) will inform my teachers if I become upset, or if I tell the researcher that I or somebody else is at risk of quite serious harm, or that I have done something illegal in the past that I have not told anybody else before. ☐
4. I agree to take part in the above study. ☐

\_\_\_\_\_  
Name of Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of Researcher

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

## Information Sheet:

### Research project on fire setting in young people

I would like to invite you to take part in a research study, which we have called "Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy". We are studying how young people who set fire think and feel, for example:

- how interested they are in fires
- how they concentrate on information about fire
- how quickly they act and react in everyday life
- how they think and feel about other people's feelings

As part of this project, I am also asking young people who do not set fires the same questions, so that I can compare the answers. Before you decide whether to take part in this study, please take time to read the following information carefully. Please ask if there is anything that is not clear to you or if you would like more information.

#### Why is the study being done?

We want to find out some things about young people who often deliberately set fires, so that we can develop better prevention and treatment programmes. At the moment, we do not have a lot of knowledge about what makes young people set fires. We also do not know how they think and feel about fire, how they process other people's feelings, and how well they are able to stop themselves from getting involved with fire and fire setting.

An important aim of this study is to try to improve a method which has been used before, using a short computer task in which young people are asked to concentrate on different information, and press a button as quickly as possible. We want to know if this method computer task is useful for studying concentration on fire information. This could help us develop prevention and treatment programmes for young people who deliberately set fires.

#### Why have I been invited to take part?

To complete this study, we ask young people who set fires, and also young people who don't set fires, to take part. We have decided to ask you because we are looking for young people who do not set fires. We want to compare the results between all participants who take part in this study.

Your school has allowed us to ask some pupils if they would like to take part in our study.

You can say no if you would prefer not to take part, that's ok.

### **Do I have to take part?**

It is completely up to you whether you take part in the study or not. If you decide to take part, you can change your mind at any time and leave the study without giving a reason, until 30 June 2013. Refusal to take part in this study will not in any way make any difference for school, the standard of any care or service you receive. If you have any questions about this project, please ask the researcher before you decide whether to take part.

If you are under 16 years of age, we also need to ask your parents for their consent.

### **What do I have to do if I agree to take part?**

If you decide to take part, you will be asked to sign a consent form. Signing the consent form shows that you understand the study and are willing to take part. You will then be asked to read some words out, and the researcher will complete some questionnaires with you, about yourself. After that, you will be asked to complete one task on a computer, which will show you some words and colours, and you will be asked to press a button as fast as possible. The questionnaires and the computer task are not a test; there are no right or wrong answers. Taking part will take about 60 minutes in total to complete. It will take place at your school.

**This is important:** Some of the things we will talk about during this research might be uncomfortable or distressing for you. You do not need to answer any questions you don't want to. **If at any time you are uncomfortable or stressed about what you need to do, we will take a break straightaway. After that you can choose if you would like to continue or not. We will also let your teachers know that you are feeling distressed.**

### **What are the possible benefits from the research?**

There is no direct benefit to you from taking part in this study. However, we hope that the results of our study will help us understand more about young people who set fires. They may help us to improve prevention and treatment programmes for fire setting. You will receive a voucher to the value of £10 as reimbursement for taking part.

### **Will my taking part in this study be kept confidential?**

Any information you provide will be kept private and will not be shown to anybody apart from the researchers. **There are only two exceptions to this rule: No one will know who you are, but if you tell me something that indicates that you, or another person, are at risk of quite serious harm then I may need to tell somebody else to keep you safe. Also, if you tell me that you have done something illegal in the past that you have not told anybody else before, then I need to tell somebody else, because your parents/guardians, or the police may need to know about it.**

Your answers will be stored **without your name on it**, on a secure computer or in a locked cabinet at the Institute of Psychiatry, King's College London.

### **What will happen to the results of the research study?**

The results of the study will be written up in a thesis as part of a doctorate course in Clinical Psychology at King's College London, where I train as a psychologist. The results will also be sent to academic psychology journals for publication, so that they can be shared with other researchers. No personal information will be identified in any publication of the results. The final results of the study will also be sent to your school, so that your teachers can show them to you if you want to.

**Who has reviewed the study?**

This research has been reviewed and approved by the Psychiatry, Nursing and Midwifery (PNM) Research Ethics Subcommittee (RESC) (Reference: PNM 11/12-93).

**Who can I contact for further information?**

If you have any further questions please feel free to call or email me at any time - until 30 June 2013, which is the last day on which you can change your mind about taking part, and choose to have your information and your responses removed from our research.

**Contact information:** Doreen Hoerold, Trainee Clinical Psychologist

**Tel:** 075 3584 1276 or 020 7848 0733

**Email:** doreen.hoerold@kcl.ac.uk

**Address:** Department of Clinical Psychology,  
Institute of Psychiatry,  
3<sup>rd</sup> Floor, ASB Building  
4 Windsor Walk,  
London, SE5 8A

If this study has harmed you in any way, you can contact my supervisor at King's College London using the details below, for further advice and information:

Dr Troy Tranah (Telephone: 020 7848 0501; Email: troy.tranah@kcl.ac.uk)

**Please remember: You don't need to take part if you don't want to.**

**If you WOULD like to take part, please complete the form I sent with this letter, and return it to your school. After that I can contact you to arrange the best time to meet with you about this project.**



**CONSENT FORM**

**Research Project on fire setting in young people**

**("Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy")**

*If you wish to take part in the above study, please read and complete the section below.*

This is to confirm that I freely consent to take part in the above research. The researcher has explained to me why the study is taking place, what I will be asked to do and how long this will take. I have read the information section and understand the nature of the study. I understand that the study is purely a research project, and I do not expect to gain any personal benefit from taking part.

I am aware that the study involves reading words and completing some questionnaires about myself. I also understand that I will be asked to take part in a computer task. This involves looking at some simple words, pictures and colours.

I understand that I am free to leave the research study at any time, until 30 June 2013, without giving a reason. I also understand that if I refuse to take part in the above study, this will not in any way affect me legally, at school or any care I receive. I understand that the information I give is strictly confidential and will not be made publicly available, except if I tell the researcher that I or somebody else is at risk of quite serious harm, or if I tell the researcher that I have done something illegal in the past that I have not told anybody else before. Information collected is for research purposes and will not be identifiable as their own.

***Please tick the box***

1. I confirm that I have read and understand the information and consent form and have had the opportunity to ask questions. ☐
2. I understand that I don't have to take part if I don't want to. I can change my mind about taking part at any time until 30 June 2013, without giving any reason. Saying no or changing my mind will not affect me at school. ☐
4. I agree that the researcher (Doreen Hoerold) will inform my teachers if I become upset, or if I tell the researcher that I or somebody else is at risk of quite serious harm, or that I have done something illegal in the past that I have not told anybody else before. ☐
5. I agree to take part in the above study. ☐

\_\_\_\_\_  
Name of Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of Researcher

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

**Research project: Fire setting in young people**

I would like to invite your child to take part in a research study, which we have called “Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy”. We are studying how young people who set fire think and feel, for example:

- how interested they are in fires
- how they concentrate on information about fire
- how quickly they act and react in everyday life
- how they think and feel about other people's feelings

As part of this project, we are also asking young people who do not set fires the same questions, so that we can compare the answers. Before you decide whether you would like your child to take part in this study, please take time to read the following information carefully. Please ask if there is anything that is not clear to you or if you would like more information.

**Why is the study being done?**

We want to find out some things about young people who often deliberately set fires, so that we can develop better prevention and treatment programmes. At the moment, we do not have a lot of knowledge about what makes young people set fires. We also do not know how they think and feel about fire, how they process other people's feelings, and how well they are able to stop themselves from getting involved with fire and fire setting.

An important aim of this study is to try to improve a method which has been used before, using a short computer task in which young people are asked to concentrate on different information, and press a button as quickly as possible. We want to know if this method computer task is useful for studying concentration on fire information. This could help us develop prevention and treatment programmes for young people who deliberately set fires.

**Why has my child been invited to take part?**

We have presented our plan for this research to your child's school. To complete this study, we ask young people who set fires, and also young people who don't set fires, to take part. We want to compare the results between all participants who take part in this study. We have decided to ask your child because we are looking for young people who do not set fires.

**Does my child have to take part?**

Participation is completely voluntary. If you agree for him/her to take part, we will then ask your child whether s/he is happy to participate. You can change your mind at any time until 30 June 2013, and your child will be able to leave the study without giving a reason. Refusal to take part in this study will not in any way affect your child's school, or standard of any care or service s/he receives. If you have any questions about this project, please ask the researcher before you make your decision.

**What does my child have to do if I agree for him/her to take part?**

We will contact you in one week to find out whether you are happy for your child to take part in the study. After that, we will ask your child again whether s/he is happy to participate. Your child will then be asked to read some thing out, and complete some questionnaires with the researcher about him/herself. After that, s/he will be asked to complete one task on a computer, which will show some words and colours, and s/he will be asked to press a button as quickly as possible. The questionnaires and computer task are not a test; there are no right or wrong answers. Taking part will take about 60 minutes in total to complete. It will take place at your child's school.



**Important:** Some topics we will discuss during this research may be distressing. If at any point during the session any participant becomes distressed or experiences discomfort, we will offer a break, ask your child if s/he would like to continue or not, and we will also let your child's teachers know.

**What are the possible benefits from the research?**

There is no direct benefit to your child from taking part in this study. However, we hope that the results of our study will help us understand more about young people who set fires. This can help us to improve prevention and treatment programmes for fire setting. Your child will receive a voucher to the value of £10 as reimbursement for taking part.

**Will personal information from this study be kept confidential?**

Any information your child provides will be kept private and will not be shown to anybody apart from the researchers. There are some exceptions to confidentiality, however: If your child tells me something that indicates that s/he, or another person, are at risk of quite serious harm, then I need to inform his/her care team and the relevant authorities to keep him/her safe. Also, if s/he tells me that s/he has done something illegal in the past that s/he have not told anybody else before, then I need to tell somebody else, because you, and/or the police may need to know about it. All data will be stored **without your child's name on it**, on a secure computer or in a locked cabinet at the Institute of Psychiatry, King's College London.

**What will happen to the results of the research study?**

The results of the study will be written up in a thesis as part of a Doctorate in Clinical Psychology at King's College London. The results will also be sent to scientific psychology journals for publication. No personal information will be identified in any publication of the results. The final results of the study will also be sent to your child's school.

**Who has reviewed the study?**

This research has been reviewed and approved by the King's College London Psychiatry, Nursing and Midwifery (PNM) Research Ethics Subcommittee (RESC) (Reference PNM/11/12-93).

**Contact for further information?**

If you have any further questions please feel free to call or email me at any time - until 30 June 2013, which is the last day on which participants or parents can change their mind about taking part, and choose to have their information and responses removed from the research.

**Contact information:** Doreen Hoerold, Trainee Clinical Psychologist

**Tel:** 075 3584 1276 or 020 7848 0733

**Email:** doreen.hoerold@kcl.ac.uk

**Address:** Department of Clinical Psychology,  
Institute of Psychiatry,  
3<sup>rd</sup> Floor, Addiction Sciences Building  
4 Windsor Walk,  
London, SE5 8AF

If this study has harmed your child in any way, you can contact my supervisor at King's College London using the details below, for further advice and information:

Dr Troy Tranah (Telephone: 020 7848 0501; Email: troy.tranah@kcl.ac.uk)

**Please note: I enclose a consent form with this letter. Please complete this form and return it to your child's school, if you are happy for your child to take part in this research study.**

**Participation in this project is entirely voluntary: You may decline or accept, without giving any further reason.**

**CONSENT FORM FOR PARENTS/GUARDIANS**

**Research Project on fire setting in young people**

**("Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy")**

*If you wish your son/daughter to take part in the above study, listen carefully and indicate your consent.*

This is to confirm that I freely consent for my son/daughter to take part in the above research. The researcher has explained to me why the study is taking place, what my child will be asked to do and how long this will take. I have read the information section and understand the nature of the study. I understand that the study is purely a research project, and I do not expect my child to gain any personal benefit from taking part.

I am aware that the study involves reading some words, and completing some questionnaires about. I also understand he/she will be asked to take part in a computer task. This involves looking at some simple words and colours.

I understand that my child is free to leave the research study at any time until 30 June 2012, without giving a reason. I also understand that if I refuse to allow my child to take part in the above study, this will not in any way affect him/her at school. I understand that the information he/she gives is strictly confidential and will not be made publicly available, except where the participant has disclosed that s/he or others are at risk of serious harm, or a previously undisclosed offence is disclosed during the study. Information collected is for research purposes and will not be identifiable as their own.

***Please indicate "YES" or "NO"***

I confirm that I have read and understand the information and have read the consent form and have had the opportunity to ask questions.

YES / NO

I understand that my child's participation is voluntary and that he/she is free to withdraw at any time until 30 June 2013, without giving any reason, without their legal rights, medical care or school being affected.

YES / NO

I understand that my child's care team will be informed if my child becomes distressed, discloses any information about him/herself being at risk for serious harm, or discloses information about an offence currently under investigation which has not been disclosed before.

YES / NO

I agree that \_\_\_\_\_, my son/daughter, may take part in the above study.

YES / NO

\_\_\_\_\_  
Name of Parent/Guardian

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of Researcher

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

This is the best way to contact me (Please give number or email address): \_\_\_\_\_

**"Research project about fire setting in young people"**  
**Information sheet for you!**

Hello, my name is Doreen and I want to know more about fire setting in young people. I am doing this as part of my course work at King's College London, where I study to be a psychologist. Please have a look at this leaflet and ask me if you have any questions.

Thank you for reading this.

What is the study about?

In this study, we are trying to understand how young people who have set fires before think and feel. We want to do this because we think it will help us to understand fire setting better, and perhaps find ways to make the education and treatment programmes for fire setters better, in the future.

We are calling this project "Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy."

Why have I been asked to take part?

We have decided to ask you because your file says that you have set fire in the past. You can say no if you would prefer not to take part, that's ok.



What will happen if I take part ?

I will ask you to read a list of words first. Then I will give you a task on a computer, and then I will ask you some questions, using short, easy questionnaires.

It will take place in the Michael Rutter Centre.

**It will take no more than 1 hour (with breaks!)**

If you agree, I will keep your answers but not your name - no one will know who you are!



Can I stop even after I said I want to take part ?

You can stop and say that you don't want to take part anymore at any time, without saying why.

You do not need to answer any questions you don't want to. If you feel uncomfortable about anything, we will stop straightaway.

You can also change your mind afterwards, and tell me if you don't want to be included in the study anymore, up until 30<sup>th</sup> June 2013. You don't have to say why.



Will the things I tell you be kept secret?

**This is very important:** No one will know who you are, but if you tell me something that indicates that you, or another child, are at risk of quite serious harm then I may need to tell somebody else to keep you safe. **Also**, if you tell me that you have done something illegal in the past that you have not told anybody else before, then I need to tell somebody else, because your parents/guardians, or the police may need to know about it.

When the study is finished, I will write a report and share it with other researchers. Again, I will not tell them the names of anybody who took part. I will also send a copy of the report to the Michael Rutter Centre, so that your care team can send them to you if you want to.

If you would like to take part, then we will also need to ask your parents for their consent (to ask if they agree that you can take part).

We will give you a £10 shop voucher, as a thank you for taking part.

**Please feel free to contact me with any questions  
(until 30 June 2013, when this project will end):**

Doreen Hoerold

Telephone: 020 3228 5222

Email: [doreen.hoerold@kcl.ac.uk](mailto:doreen.hoerold@kcl.ac.uk)

You can also ask my two supervisors, who help me with this study:

Dr Troy Tranah (Telephone: 020 3228 3381)

Dr Matt Woolgar (Telephone: 020 3228 2546)

They both work at the Michael Rutter Centre.

If you would like to speak with somebody else about how research projects work, you can call the British Psychological Society: 0116 254 9568

CONSENT FORM

**Research Project on fire setting in young people**

**("Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy")**

*If you wish to take part in our study, please read this, and then tick the boxes below.*

This is to confirm that I am happy to take part in the above research. The researcher has explained to me why the study is taking place, what I will be asked to do and how long this will take. I have read the information sheet.

I am aware that the study involves reading words, and filling out some questionnaires. I also understand that I will be asked to take part in a computer task. This involves looking at some simple words, and colours.

I understand that I am free to leave the research study at any time until 30 June 2013, without saying why. I understand that the researchers will keep my answers, but not my name, so that nobody will know what I said, except if I tell the researcher that I or somebody else is at risk of quite serious harm, or if I tell the researcher that I have done something illegal in the past that I have not told anybody else before.

1. I am ticking this box because I have read and understand the information and consent form and have been allowed to ask any questions I had. ☐
2. I understand that I don't have to take part if I don't want to. I can change my mind about taking part at any time until 30 June 2013, without giving any reason. Saying no or changing my mind will not change anything for me at school or at the Michael Rutter Centre. ☐
3. I agree to take part in the above study. ☐

\_\_\_\_\_  
Name of Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of Researcher

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature



## **Information Sheet:**

### **Research project on fire setting in young people**

I would like to invite you to take part in a research study, which we have called “Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy”. We are studying how young people who set fire think and feel, for example:

- how interested they are in fires
- how they concentrate on information about fire
- how quickly they act and react in everyday life
- how they think and feel about other people's feelings

Before you decide whether to take part in this study, please take time to read the following information carefully. Please ask if there is anything that is not clear to you or if you would like more information.

#### **Why is the study being done?**

We want to find out some things about young people who often deliberately set fires, so that we can develop better prevention and treatment programmes. At the moment, we do not have a lot of knowledge about what makes young people set fires. We also do not know how they think and feel about fire, how they process other people's feelings, and how well they are able to stop themselves from getting involved with fire and fire setting.

An important aim of this study is to try to improve a method which has been used before, using a short computer task in which young people are asked to concentrate on different information, and press a button as quickly as possible. We want to know if this method computer task is useful for studying concentration on fire information. This could help us develop prevention and treatment programmes for young people who deliberately set fires.

#### **Why have I been invited to take part?**

You have been invited to participate in this study because you are a young person with a history of fire setting.

### **Do I have to take part?**

It is completely up to you whether you take part in the study or not. If you decide to take part, you can change your mind at any time and leave the study without giving a reason, until 30 June 2013. Refusal to take part in this study will not in any way affect your treatment within the criminal justice system, or make any difference for the standard of any care or service you receive. If you have any questions about this project, please ask the researcher before you decide whether to take part. If you are under 16 years of age, we also need to ask your parents for their consent.

### **What do I have to do if I agree to take part?**

If you decide to take part, you will be asked to sign a consent form. Signing the consent form shows that you understand the study and are willing to take part. You will then be asked to read some words out, and the researcher will complete some questionnaires with you, about yourself. After that, you will be asked to complete one task on a computer, which will show you some words and colours, and you will be asked to press a button as fast as possible. The questionnaires and task are not a test; there are no right or wrong answers. Taking part will take about 60 minutes in total to complete. You do not need to answer any questions you don't want to. If at any time you are uncomfortable or stressed about what you need to do, the session will stop straightaway.

### **What are the possible benefits from the research?**

There is no direct benefit to you from taking part in this study. However, we hope that the results of our study will help us understand more about young people who set fires. They may help us to improve prevention and treatment programmes for fire setting. You will receive a voucher to the value of £10 as reimbursement for taking part.

### **Will my taking part in this study be kept confidential?**

Any information you provide will be kept private and will not be shown to anybody apart from the researchers. **There are only two exceptions to this rule: No one will know who you are, but if you tell me something that indicates that you, or another person, are at risk of quite serious harm then I may need to tell somebody else to keep you safe. Also, if you tell me that you have done something illegal in the past that you have not told anybody else before, then I need to tell somebody else, because your parents/guardians, or the police may need to know about it.** Your answers will be stored **without your name on it**, on a secure computer or in a locked cabinet at the Institute of Psychiatry, King's College London.

### **What will happen to the results of the research study?**

The results of the study will be written up in a thesis as part of a doctorate course in Clinical Psychology, at King's College London, where I train as a psychologist. The results will also be sent to academic psychology journals for publication, so that they can be shared with other researchers. No personal information will be identified in any publication of the results. The final results of the study will also be sent to the Michael Rutter Centre, so that your care team can send them to you if you want to.

### **Who has reviewed the study?**

This research has been reviewed and approved by the North East – Northern and Yorkshire Research Ethics Committee.



**Who can I contact for further information?**

If you have any further questions please feel free to call or email me at any time, until 30 June 2013, when the project will end.

**Contact information:** Doreen Hoerold, Trainee Clinical Psychologist

**Tel:** 075 3584 1276  
or 020 3228 5222

**Email:** doreen.hoerold@kcl.ac.uk

**Address:** Department of Clinical Psychology,  
Institute of Psychiatry,  
3<sup>rd</sup> Floor, ASB Building  
4 Windsor Walk,  
London, SE5 8AF

You can also ask my two supervisors, who help me with this study:

Dr Troy Tranah (Telephone: 020 3228 3381)

Dr Matt Woolgar (Telephone: 020 3228 2546)

They both work at the Michael Rutter Centre.

You may also wish to speak with somebody about psychological research in general. In this case, you may contact the British Psychological Society, who provide independent advice about research studies in psychology: 0116 254 9568.

**CONSENT FORM**

**Research Project on fire setting in young people**

**("Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy")**

*If you wish to take part in the above study, please read and complete the section below.*

This is to confirm that I freely consent to take part in the above research. The researcher has explained to me why the study is taking place, what I will be asked to do and how long this will take. I have read the information section and understand the nature of the study. I understand that the study is purely a research project, and I do not expect to gain any personal benefit from taking part.

I am aware that the study involves reading words and completing some questionnaires about myself. I also understand that I will be asked to take part in a computer task. This involves looking at some simple words, pictures and colours.

I understand that I am free to leave the research study at any time, until 30 June 2013, without giving a reason. I also understand that if I refuse to take part in the above study, this will not in any way affect me legally, at school or any care I receive. I understand that the information I give is strictly confidential and will not be made publicly available, except for disclosures that indicate to the researcher that I or others are at risk of serious harm, or a previously undisclosed offence is disclosed during the study. Information collected is for research purposes and will not be identifiable as their own.

***Please tick the box***

1. I confirm that I have read and understand the information and consent form and have had the opportunity to ask questions. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time until 30 June 2013, without giving any reason, without my legal rights, medical care or school being affected. ☐
3. I agree to take part in the above study. ☐

\_\_\_\_\_  
Name of Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of Researcher

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

### **Research project: Fire setting in young people**

I would like to invite your child to take part in a research study, which we have called “Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy”. We are studying how young people who set fire think and feel, for example:

- how interested they are in fires
- how they concentrate on information about fire
- how quickly they act and react in everyday life
- how they think and feel about other people's feelings

Before you decide whether you would like your child to take part in this study, please take time to read the following information carefully. Please ask if there is anything that is not clear to you or if you would like more information.

#### **Why is the study being done?**

We want to find out some things about young people who often deliberately set fires, so that we can develop better prevention and treatment programmes. At the moment, we do not have a lot of knowledge about what makes young people set fires. We also do not know how they think and feel about fire, how they process other people's feelings, and how well they are able to stop themselves from getting involved with fire and fire setting.

An important aim of this study is to try to improve a method which has been used before, using a short computer task in which young people are asked to concentrate on different information, and press a button as quickly as possible. We want to know if this method computer task is useful for studying concentration on fire information. This could help us develop prevention and treatment programmes for young people who deliberately set fires.

#### **Why has my child been invited to take part?**

We have presented our plan for this research to the staff at the Michael Rutter Centre. Your child has been invited to participate in this study because our records have indicated to us that s/he is a young person who has set fires in the past.

#### **Does my child have to take part?**

Participation is completely voluntary. If you agree for him/her to take part, we will then ask your child whether s/he is happy to participate. You can change your mind at any time until 30 June 2013, and your child will be able to leave the study without giving a reason. Refusal to take part in this study will not in any way affect your child's treatment at the Michael Rutter Centre, or affect the standard of any care or service s/he receives. If you have any questions about this project, please ask the researcher before you make your decision.

**What does my child have to do if I agree for him/her to take part?**

We will contact you in one week to find out whether you are happy for your child to take part in the study. After that, we will ask your child again whether s/he is happy to participate. Your child will then be asked to read some thing out, and complete some questionnaires with the researcher about him/herself. After that, s/he will be asked to complete one task on a computer, which will show some words and colours, and s/he will be asked to press a button as quickly as possible. The questionnaires and computer task are not a test; there are no right or wrong answers. Taking part will take about 60 minutes in total to complete. It will take place at the Michael Rutter Centre. If at any point during the session any participant becomes distressed or experiences discomfort, the session will stop immediately.

**What are the possible benefits from the research?**

There is no direct benefit to your child from taking part in this study. However, we hope that the results of our study will help us understand more about young people who set fires. This can help us to improve prevention and treatment programmes for fire setting. Your child will receive a voucher to the value of £10 as reimbursement for taking part.

**Will personal information from this study be kept confidential?**

Any information you provide will be kept private and will not be shown to anybody apart from the researchers. There are some exceptions to confidentiality, however: If your child tells me something that indicates that s/he, or another person, are at risk of quite serious harm, then I need to inform his/her care team and the relevant authorities to keep him/her safe. Also, if s/he tells me that s/he has done something illegal in the past that s/he have not told anybody else before, then I need to tell somebody else, because you, and/or the police may need to know about it. All data will be stored **without your child's name on it**, on a secure computer or in a locked cabinet at the Institute of Psychiatry, King's College London.

**What will happen to the results of the research study?**

The results of the study will be written up in a thesis as part of a Doctorate in Clinical Psychology at King's College London. The results will also be sent to academic psychology journals for publication. No personal information will be identified in any publication of the results. The final results of the study will be sent to your child's care team at the Michael Rutter Centre, who can send them on to you if you wish.

**Who has reviewed the study?**

This research has been reviewed and approved by the North East – Northern and Yorkshire Research Ethics Committee.

**Contact for further information?**

If you have any further questions please feel free to call or email me at any time.

**Contact information:** Doreen Hoerold, Trainee Clinical Psychologist

**Tel:** 020 3228 5222

**Email:** doreen.hoerold@kcl.ac.uk

**Address:** Department of Clinical Psychology,  
Institute of Psychiatry,  
3<sup>rd</sup> Floor, Addiction Sciences Building  
4 Windsor Walk,  
London, SE5 8AF

You may also wish to speak with somebody about psychological research in general. In this case, you may contact the British Psychological Society, who provide independent advice about research studies in psychology: 0116 254 9568.

**CONSENT FORM FOR PARENTS/GUARDIANS**

**Research Project on fire setting in young people**

**("Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy")**

*If you wish your son/daughter to take part in the above study, listen carefully and indicate your consent.*

This is to confirm that I freely consent for my son/daughter to take part in the above research. The researcher has explained to me why the study is taking place, what my child will be asked to do and how long this will take. I have read the information section and understand the nature of the study. I understand that the study is purely a research project, and I do not expect my child to gain any personal benefit from taking part.

I am aware that the study involves my child reading some words, and completing some questionnaires about him/herself. I also understand he/she will be asked to take part in a computer task. This involves looking at some simple words and colours.

I understand that my child is free to leave the research study at any time until 30 June 2012, without giving a reason. I also understand that if I refuse to allow my child to take part in the above study, this will not in any way affect him/her at school or any care they receive. I understand that the information he/she gives is strictly confidential and will not be made publicly available, except where the participant has disclosed that s/he or others are at risk of serious harm, or a previously undisclosed offence is disclosed during the study. Information collected is for research purposes and will not be identifiable as their own.

***Please indicate "YES" or "NO"***

1. I confirm that I have read and understand the information and have been read out the consent form and have had the opportunity to ask questions. I understand that this decision is being audio-recorded.

YES / NO

2. I understand that my child's participation is voluntary and that he/she is free to withdraw at any time until 30 June 2013, without giving any reason, without their legal rights, medical care or school being affected.

YES / NO

3. I agree that \_\_\_\_\_, my son/daughter, may take part in the above study.

YES / NO

\_\_\_\_\_  
Name of Parent/Guardian

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name of Researcher

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

Version 2

Dated 25.02.12

## **"Research project about fire setting in young people"**

### **Information sheet for you!**

Hello, my name is Doreen and I want to know more about fire setting in young people. To help me with my study, I am also asking young people who do not set fires the same questions, so that I can compare the answers. I am doing this as part of my course work at King's College London, where I study to be a psychologist. Please have a look at this leaflet and ask me if you have any questions.

**What is the study about?**

In this study, we are trying to understand how young people who have set fires before think and feel. We want to do this because we think it will help us to understand fire setting better, and perhaps find ways to make the education and treatment programmes for fire setters better, in the future.

We are calling this project "Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy."

**Why have I been asked to take part?**

For this study, we ask young people who set fires, and also young people who don't set fires, to take part. We have decided to ask you because we are looking for young people who do not set fires. You can say no if you would prefer not to take part, that's ok.

What will happen if I take part ?

I will ask you to read a list of words first. Then I will give you a task on a computer, and then I will ask you some questions, using short, easy questionnaires.

It will take place in your school.

**It will take no more than 1 hour (with breaks!)**

If you agree, I will keep your answers but not your name - no one will know who you are!

Can I stop even after I said I want to take part ?

You can stop and say that you don't want to take part anymore at any time, without saying why.

You do not need to answer any questions you don't want to. If you feel uncomfortable about anything, we will stop straightaway.

You can also change your mind afterwards, and tell me if you don't want to be included in the study anymore, up until 30<sup>th</sup> June 2013. You don't have to say why.

Will the things I tell you be kept secret?

**This is very important:** No one will know who you are, but if you tell me something that indicates that you, or another child, are at risk of quite serious harm then I may need to tell somebody else to keep you safe. Also, if you tell me that you have done something illegal in the past that you have not told anybody else before, then I need to tell somebody else, because your parents/guardians, or the police may need to know about it.

When the study is finished, I will write a report and share it with other researchers. Again, I will not tell them the names of anybody who took part. I will also send a copy of the report to the Michael Rutter Centre, so that your care team can send them to you if you want.



If you would like to take part, then we will also need to ask your parents for their consent (to ask if they agree that you can take part).

We will give you a £10 shop voucher, as a thank you for taking part.

**Please feel free to contact me with any questions  
(until 30 June 2013, when this project will end):**

Doreen Hoerold

Telephone: 020 3228 5222

Email: [doreen.hoerold@kcl.ac.uk](mailto:doreen.hoerold@kcl.ac.uk)

You can also ask my two supervisors, who help me with this study:

Dr Troy Tranah (Telephone: 020 3228 3381)

Dr Matt Woolgar (Telephone: 020 3228 2546)

They both work at the Michael Rutter Centre for children and young people.

If you would like to speak with somebody else about how research projects work, you can call the British Psychological Society:

Telephone: 0116 254 9568



## **Information Sheet:**

### **Research project on fire setting in young people**

I would like to invite you to take part in a research study, which we have called “Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy”. We are studying how young people who set fire think and feel, for example:

- how interested they are in fires
- how they concentrate on information about fire
- how quickly they act and react in everyday life
- how they think and feel about other people's feelings

As part of this project, I am also asking young people who do not set fires the same questions, so that I can compare the answers. Before you decide whether to take part in this study, please take time to read the following information carefully. Please ask if there is anything that is not clear to you or if you would like more information.

#### **Why is the study being done?**

We want to find out some things about young people who often deliberately set fires, so that we can develop better prevention and treatment programmes. At the moment, we do not have a lot of knowledge about what makes young people set fires. We also do not know how they think and feel about fire, how they process other people's feelings, and how well they are able to stop themselves from getting involved with fire and fire setting.

An important aim of this study is to try to improve a method which has been used before, using a short computer task in which young people are asked to concentrate on different information, and press a button as quickly as possible. We want to know if this method computer task is useful for studying concentration on fire information. This could help us develop prevention and treatment programmes for young people who deliberately set fires.

### **Why have I been invited to take part?**

To complete this study, we ask young people who set fires, and also young people who don't set fires, to take part. We have decided to ask you because we are looking for young people who do not set fires. You can say no if you would prefer not to take part, that's ok.

### **Do I have to take part?**

It is completely up to you whether you take part in the study or not. If you decide to take part, you can change your mind at any time and leave the study without giving a reason, until 30 June 2013. Refusal to take part in this study will not in any way make any difference for the standard of any care or service you receive. If you have any questions about this project, please ask the researcher before you decide whether to take part.

If you are under 16 years of age, we also need to ask your parents for their consent.

### **What do I have to do if I agree to take part?**

If you decide to take part, you will be asked to sign a consent form. Signing the consent form shows that you understand the study and are willing to take part. You will then be asked to read some words out, and the researcher will complete some questionnaires with you, about yourself. After that, you will be asked to complete one task on a computer, which will show you some words and colours, and you will be asked to press a button as fast as possible. The questionnaires and the computer task are not a test; there are no right or wrong answers. Taking part will take about 60 minutes in total to complete.

You do not need to answer any questions you don't want to. If at any time you are uncomfortable or stressed about what you need to do, the session will stop straightaway.

### **What are the possible benefits from the research?**

There is no direct benefit to you from taking part in this study. However, we hope that the results of our study will help us understand more about young people who set fires. They may help us to improve prevention and treatment programmes for fire setting. You will receive a voucher to the value of £10 as reimbursement for taking part.

### **Will my taking part in this study be kept confidential?**

Any information you provide will be kept private and will not be shown to anybody apart from the researchers. **There are only two exceptions to this rule: No one will know who you are, but if you tell me something that indicates that you, or another person, are at risk of quite serious harm then I may need to tell somebody else to keep you safe. Also, if you tell me that you have done something illegal in the past that you have not told anybody else before, then I need to tell somebody else, because your parents/guardians, or the police may need to know about it.**

Your answers will be stored **without your name on it**, on a secure computer or in a locked cabinet at the Institute of Psychiatry, King's College London.

### **What will happen to the results of the research study?**

The results of the study will be written up in a thesis as part of a doctorate course in Clinical Psychology at King's College London, where I train as a psychologist. The results will also be sent to academic psychology journals for publication, so that they can be shared with other researchers. No personal information will be identified in any publication of the results. The final results of the study will also be sent to the Michael Rutter Centre, so that your care team can send them to you if you want to.

**Who has reviewed the study?**

This research has been reviewed and approved by the North East – Northern and Yorkshire Research Ethics Committee.

**Who can I contact for further information?**

If you have any further questions please feel free to call or email me at any time, until 30 June 2013, when the project will end.

**Contact information:** Doreen Hoerold, Trainee Clinical Psychologist

**Tel:** 020 3228 5222

**Email:** doreen.hoerold@kcl.ac.uk

**Address:** Department of Clinical Psychology,  
Institute of Psychiatry,  
3<sup>rd</sup> Floor, ASB Building  
4 Windsor Walk,  
London, SE5 8AF

You may also wish to speak with somebody about psychological research in general. In this case, you may contact the British Psychological Society, who provide independent advice about research studies in psychology: 0116 254 9568.

**CONSENT FORM** [for 15-18 year old participants]

**Research Project on fire setting in young people**

**("Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy")**

*If you wish to take part in the above study, please read and complete the section below.*

This is to confirm that I freely consent to take part in the above research. The researcher has explained to me why the study is taking place, what I will be asked to do and how long this will take. I have read the information section and understand the nature of the study. I understand that the study is purely a research project, and I do not expect to gain any personal benefit from taking part.

I am aware that the study involves reading words and completing some questionnaires about myself. I also understand that I will be asked to take part in a computer task. This involves looking at some simple words, pictures and colours.

I understand that I am free to leave the research study at any time, until 30 June 2013, without giving a reason. I also understand that if I refuse to take part in the above study, this will not in any way affect me legally, at school or any care I receive. I understand that the information I give is strictly confidential and will not be made publicly available, except for disclosures that indicate to the researcher that I or others are at risk of serious harm, or a previously undisclosed offence is disclosed during the study. Information collected is for research purposes and will not be identifiable as their own.

***Please tick the box***

1. I confirm that I have read and understand the information and consent form and have had the opportunity to ask questions. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time until 30 June 2013, without giving any reason, without my legal rights, medical care or school being affected. ☐
3. I agree to take part in the above study. ☐

\_\_\_\_\_  
Name of Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of Researcher

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

### **Research project: Fire setting in young people**

I would like to invite your child to take part in a research study, which we have called “Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy”. We are studying how young people who set fire think and feel, for example:

- how interested they are in fires
- how they concentrate on information about fire
- how quickly they act and react in everyday life
- how they think and feel about other people's feelings

As part of this project, we are also asking young people who do not set fires the same questions, so that we can compare the answers. Before you decide whether you would like your child to take part in this study, please take time to read the following information carefully. Please ask if there is anything that is not clear to you or if you would like more information.

#### **Why is the study being done?**

We want to find out some things about young people who often deliberately set fires, so that we can develop better prevention and treatment programmes. At the moment, we do not have a lot of knowledge about what makes young people set fires. We also do not know how they think and feel about fire, how they process other people's feelings, and how well they are able to stop themselves from getting involved with fire and fire setting.

An important aim of this study is to try to improve a method which has been used before, using a short computer task in which young people are asked to concentrate on different information, and press a button as quickly as possible. We want to know if this method computer task is useful for studying concentration on fire information. This could help us develop prevention and treatment programmes for young people who deliberately set fires.

#### **Why has my child been invited to take part?**

We have presented our plan for this research to the staff at the Michael Rutter Centre. To complete this study, we ask young people who set fires, and also young people who don't set fires, to take part. We have decided to ask your child because we are looking for young people who do not set fires.

#### **Does my child have to take part?**

Participation is completely voluntary. If you agree for him/her to take part, we will then ask your child whether s/he is happy to participate. You can change your mind at any time until 30 June 2013, and your child will be able to leave the study without giving a reason. Refusal to take part in this study will not in any way affect your child's treatment at the Michael Rutter Centre, or affect the standard of any care or service s/he receives. If you have any questions about this project, please ask the researcher before you make your decision.

**What does my child have to do if I agree for him/her to take part?**

We will contact you in one week to find out whether you are happy for your child to take part in the study. After that, we will ask your child again whether s/he is happy to participate. Your child will then be asked to read something out, and complete some questionnaires with the researcher about him/herself. After that, s/he will be asked to complete one task on a computer, which will show some words and colours, and s/he will be asked to press a button as quickly as possible. The questionnaires and computer task are not a test; there are no right or wrong answers. Taking part will take about 60 minutes in total to complete. It will take place at the Michael Rutter Centre. If at any point during the session any participant becomes distressed or experiences discomfort, the session will stop immediately.

**What are the possible benefits from the research?**

There is no direct benefit to your child from taking part in this study. However, we hope that the results of our study will help us understand more about young people who set fires. This can help us to improve prevention and treatment programmes for fire setting. Your child will receive a voucher to the value of £10 as reimbursement for taking part.

**Will personal information from this study be kept confidential?**

Any information your child provides will be kept private and will not be shown to anybody apart from the researchers. There are some exceptions to confidentiality, however: If your child tells me something that indicates that s/he, or another person, are at risk of quite serious harm, then I need to inform his/her care team and the relevant authorities to keep him/her safe. Also, if s/he tells me that s/he has done something illegal in the past that s/he has not told anybody else before, then I need to tell somebody else, because you, and/or the police may need to know about it. All data will be stored **without your child's name on it**, on a secure computer or in a locked cabinet at the Institute of Psychiatry, King's College London.

**What will happen to the results of the research study?**

The results of the study will be written up in a thesis as part of a Doctorate in Clinical Psychology at King's College London. The results will also be sent to academic psychology journals for publication. No personal information will be identified in any publication of the results. The final results of the study will be sent to your child's care team at the Michael Rutter Centre, who can send them on to you if you wish.

**Who has reviewed the study?**

This research has been reviewed and approved by the North East – Northern and Yorkshire Research Ethics Committee.

**Contact for further information?**

If you have any further questions please feel free to call or email me at any time.

**Contact information:** Doreen Hoerold, Trainee Clinical Psychologist

**Tel:** 020 3228 5222

**Email:** doreen.hoerold@kcl.ac.uk

**Address:** Department of Clinical Psychology,  
Institute of Psychiatry,  
3<sup>rd</sup> Floor, Addiction Sciences Building  
4 Windsor Walk,  
London, SE5 8AF

You may also wish to speak with somebody about psychological research in general. In this case, you may contact the British Psychological Society, who provide independent advice about research studies in psychology: 0116 254 9568.

**"Research project about fire setting in young people"**  
**Information sheet for you!**

Hello, my name is Doreen and I want to know more about fire setting in young people. To help me with my study, I am also asking young people who do not set fires the same questions, so that I can compare the answers. I am doing this as part of my course work at King's College London, where I study to be a psychologist. Please have a look at this leaflet and ask me if you have any questions.

What is the study about?

In this study, we are trying to understand how young people who have set fires before think and feel. We want to do this because we think it will help us to understand fire setting better, and perhaps find ways to make the education and treatment programmes for fire setters better, in the future.

We are calling this project "Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy."

Why have I been asked to take part?

For this study, we ask young people who set fires, and also young people who don't set fires, to take part. We have decided to ask you because we are looking for young people who do not set fires. Your school has allowed us to ask some pupils if they would like to take part in our study. You can say no if you would prefer not to take part, that's ok.



What will happen if I take part ?

I will ask you to read a list of words first. Then I will give you a task on a computer, and then I will ask you some questions, using short, easy questionnaires.

It will take place in your school.

**It will take no more than 1 hour (with breaks!)**

If you agree, I will keep your answers but not your name - no one will know who you are!

Can I stop even after I said I want to take part ?

You can stop and say that you don't want to take part anymore at any time, without saying why.

You do not need to answer any questions you don't want to. If you feel uncomfortable about anything, we will stop straightaway.

You can also change your mind afterwards, and tell me if you don't want to be included in the study anymore, up until 30<sup>th</sup> June 2013. You don't have to say why.

Will the things I tell you be kept secret?

**This is very important:** No one will know who you are, but if you tell me something that indicates that you, or another child, are at risk of quite serious harm then I may need to tell somebody else to keep you safe. **Also**, if you tell me that you have done something illegal in the past that you have not told anybody else before, then I need to tell somebody else, because your parents/guardians, or the police may need to know about it.

When the study is finished, I will write a report and share it with with other researchers. Again, I will not tell them the names of anybody who took part. I will also send a copy of the report to your school, so that your teachers can show them to you if you want.



If you would like to take part, then we will also need to ask your parents for their consent (to ask if they agree that you can take part).

We will give you a £10 shop voucher, as a thank you for taking part.

**Please feel free to contact me with any questions  
(until 30 June 2013, when this project will end):**

Doreen Hoerold

Telephone: 020 3228 5222

Email: [doreen.hoerold@kcl.ac.uk](mailto:doreen.hoerold@kcl.ac.uk)

You can also ask my two supervisors, who help me with this study:

Dr Troy Tranah (Telephone: 020 3228 3381)

Dr Matt Woolgar (Telephone: 020 3228 2546)

They both work at the Michael Rutter Centre for children and young people.

If you would like to speak with somebody else about how research projects work, you can call the British Psychological Society:

Telephone: 0116 254 9568

## **Information Sheet:**

### **Research project on fire setting in young people**

I would like to invite you to take part in a research study, which we have called “Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy”. We are studying how young people who set fire think and feel, for example:

- how interested they are in fires
- how they concentrate on information about fire
- how quickly they act and react in everyday life
- how they think and feel about other people's feelings

As part of this project, I am also asking young people who do not set fires the same questions, so that I can compare the answers. Before you decide whether to take part in this study, please take time to read the following information carefully. Please ask if there is anything that is not clear to you or if you would like more information.

#### **Why is the study being done?**

We want to find out some things about young people who often deliberately set fires, so that we can develop better prevention and treatment programmes. At the moment, we do not have a lot of knowledge about what makes young people set fires. We also do not know how they think and feel about fire, how they process other people's feelings, and how well they are able to stop themselves from getting involved with fire and fire setting.

An important aim of this study is to try to improve a method which has been used before, using a short computer task in which young people are asked to concentrate on different information, and press a button as quickly as possible. We want to know if this method computer task is useful for studying concentration on fire information. This could help us develop prevention and treatment programmes for young people who deliberately set fires.

### **Why have I been invited to take part?**

To complete this study, we ask young people who set fires, and also young people who don't set fires, to take part. We have decided to ask you because we are looking for young people who do not set fires. Your school has allowed us to ask some pupils if they would like to take part in our study. You can say no if you would prefer not to take part, that's ok.

### **Do I have to take part?**

It is completely up to you whether you take part in the study or not. If you decide to take part, you can change your mind at any time and leave the study without giving a reason, until 30 June 2013. Refusal to take part in this study will not in any way make any difference for school, the standard of any care or service you receive. If you have any questions about this project, please ask the researcher before you decide whether to take part.

If you are under 16 years of age, we also need to ask your parents for their consent.

### **What do I have to do if I agree to take part?**

If you decide to take part, you will be asked to sign a consent form. Signing the consent form shows that you understand the study and are willing to take part. You will then be asked to read some words out, and the researcher will complete some questionnaires with you, about yourself. After that, you will be asked to complete one task on a computer, which will show you some words and colours, and you will be asked to press a button as fast as possible. The questionnaires and the computer task are not a test; there are no right or wrong answers. Taking part will take about 60 minutes in total to complete. It will take place at school.

You do not need to answer any questions you don't want to. If at any time you are uncomfortable or stressed about what you need to do, the session will stop straightaway.

### **What are the possible benefits from the research?**

There is no direct benefit to you from taking part in this study. However, we hope that the results of our study will help us understand more about young people who set fires. They may help us to improve prevention and treatment programmes for fire setting. You will receive a voucher to the value of £10 as reimbursement for taking part.

### **Will my taking part in this study be kept confidential?**

Any information you provide will be kept private and will not be shown to anybody apart from the researchers. **There are only two exceptions to this rule: No one will know who you are, but if you tell me something that indicates that you, or another person, are at risk of quite serious harm then I may need to tell somebody else to keep you safe. Also, if you tell me that you have done something illegal in the past that you have not told anybody else before, then I need to tell somebody else, because your parents/guardians, or the police may need to know about it.**

Your answers will be stored **without your name on it**, on a secure computer or in a locked cabinet at the Institute of Psychiatry, King's College London.

**What will happen to the results of the research study?**

The results of the study will be written up in a thesis as part of a doctorate course in Clinical Psychology at King's College London, where I train as a psychologist. The results will also be sent to academic psychology journals for publication, so that they can be shared with other researchers. No personal information will be identified in any publication of the results. The final results of the study will also be sent to your school, so that your teachers can show them to you if you want to.

**Who has reviewed the study?**

This research has been reviewed and approved by the North East – Northern and Yorkshire Research Ethics Committee.

**Who can I contact for further information?**

If you have any further questions please feel free to call or email me at any time, until 30 June 2013, when the project will end.

**Contact information:** Doreen Hoerold, Trainee Clinical Psychologist

**Tel:** 020 3228 5222

**Email:** doreen.hoerold@kcl.ac.uk

**Address:** Department of Clinical Psychology,  
Institute of Psychiatry,  
3<sup>rd</sup> Floor, ASB Building  
4 Windsor Walk,  
London, SE5 8AF

You may also wish to speak with somebody about psychological research in general. In this case, you may contact the British Psychological Society, who provide independent advice about research studies in psychology: 0116 254 9568.

### **Research project: Fire setting in young people**

I would like to invite your child to take part in a research study, which we have called “Correlates of adolescent fire setting: Examining the role of fire interest, attentional bias, impulsivity and empathy”. We are studying how young people who set fire think and feel, for example:

- how interested they are in fires
- how they concentrate on information about fire
- how quickly they act and react in everyday life
- how they think and feel about other people's feelings

As part of this project, we are also asking young people who do not set fires the same questions, so that we can compare the answers. Before you decide whether you would like your child to take part in this study, please take time to read the following information carefully. Please ask if there is anything that is not clear to you or if you would like more information.

#### **Why is the study being done?**

We want to find out some things about young people who often deliberately set fires, so that we can develop better prevention and treatment programmes. At the moment, we do not have a lot of knowledge about what makes young people set fires. We also do not know how they think and feel about fire, how they process other people's feelings, and how well they are able to stop themselves from getting involved with fire and fire setting.

An important aim of this study is to try to improve a method which has been used before, using a short computer task in which young people are asked to concentrate on different information, and press a button as quickly as possible. We want to know if this method computer task is useful for studying concentration on fire information. This could help us develop prevention and treatment programmes for young people who deliberately set fires.

#### **Why has my child been invited to take part?**

We have presented our plan for this research to your child's school. To complete this study, we ask young people who set fires, and also young people who don't set fires, to take part. We have decided to ask your child because we are looking for young people who do not set fires.

#### **Does my child have to take part?**

Participation is completely voluntary. If you agree for him/her to take part, we will then ask your child whether s/he is happy to participate. You can change your mind at any time until 30 June 2013, and your child will be able to leave the study without giving a reason. Refusal to take part in this study will not in any way affect your child's school, or standard of any care or service s/he receives. If you have any questions about this project, please ask the researcher before you make your decision.

**What does my child have to do if I agree for him/her to take part?**

We will contact you in one week to find out whether you are happy for your child to take part in the study. After that, we will ask your child again whether s/he is happy to participate. Your child will then be asked to read some thing out, and complete some questionnaires with the researcher about him/herself. After that, s/he will be asked to complete one task on a computer, which will show some words and colours, and s/he will be asked to press a button as quickly as possible. The questionnaires and computer task are not a test; there are no right or wrong answers. Taking part will take about 60 minutes in total to complete. It will take place at your child's school. If at any point during the session any participant becomes distressed or experiences discomfort, the session will stop immediately.

**What are the possible benefits from the research?**

There is no direct benefit to your child from taking part in this study. However, we hope that the results of our study will help us understand more about young people who set fires. This can help us to improve prevention and treatment programmes for fire setting. Your child will receive a voucher to the value of £10 as reimbursement for taking part.

**Will personal information from this study be kept confidential?**

Any information your child provides will be kept private and will not be shown to anybody apart from the researchers. There are some exceptions to confidentiality, however: If your child tells me something that indicates that s/he, or another person, are at risk of quite serious harm, then I need to inform his/her care team and the relevant authorities to keep him/her safe. Also, if s/he tells me that s/he has done something illegal in the past that s/he have not told anybody else before, then I need to tell somebody else, because you, and/or the police may need to know about it. All data will be stored **without your child's name on it**, on a secure computer or in a locked cabinet at the Institute of Psychiatry, King's College London.

**What will happen to the results of the research study?**

The results of the study will be written up in a thesis as part of a Doctorate in Clinical Psychology at King's College London. The results will also be sent to academic psychology journals for publication. No personal information will be identified in any publication of the results. The final results of the study will also be sent to your child's school.

**Who has reviewed the study?**

This research has been reviewed and approved by the North East – Northern and Yorkshire Research Ethics Committee.

**Contact for further information?**

If you have any further questions please feel free to call or email me at any time.

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